



SAFETY DATA SHEET

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Product number 52950

Synonyms; trade names SULFONAX

REACH registration number 01-2119490234-40-XXXX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cleaning agent. Industrial application Polymer Additive Chemical Intermediate For further information, see attached Exposure Scenario.

1.3. Details of the supplier of the safety data sheet

Supplier Univar Solutions UK Ltd
 Aquarius House
 6 Mid Point Business Park
 Bradford
 BD3 7AY
 +44 1274 267300
 +44 1274 267306
 SDS@UnivarSolutions.com

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 52950

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Skin Corr. 1C - H314 Eye Dam. 1 - H318

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements

P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
 Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with local regulations.

Contains

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL Dervis

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL Dervis		25 - 100%
CAS number: 85536-14-7	EC number: 287-494-3	REACH registration number: 01-2119490234-40-XXXX
Classification Acute Tox. 4 - H302 Skin Corr. 1C - H314 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412		

The full text for all hazard statements is displayed in Section 16.

Product name BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL Dervis

REACH registration number 01-2119490234-40-XXXX

Composition comments The data shown are in accordance with the latest EC Directives. UVCB

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

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Ingestion	Get medical attention immediately. Rinse mouth thoroughly with water. Remove any dentures. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Give plenty of water to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated by a physician. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin contact	Get medical attention immediately. Wash skin thoroughly with soap and water. Remove contaminated clothing. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated by a physician. Wash clothing and clean shoes thoroughly before reuse.
Eye contact	Get medical attention immediately. Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Chemical burns must be treated by a physician.
Protection of first aiders	No action shall be taken without appropriate training or involving any personal risk. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. First aid personnel should wear appropriate protective equipment during any rescue. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

4.2. Most important symptoms and effects, both acute and delayed

Ingestion	Harmful if swallowed. Overexposure may cause the following adverse effects: Stomach pain.
Skin contact	Causes severe burns. Overexposure may cause the following adverse effects: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns. Overexposure may cause the following adverse effects: Pain. Redness. Profuse watering of the eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically. Contact specialist immediately poison treatment if large quantities have been ingested or inhaled
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. Harmful to aquatic life with long lasting effects. Avoid the spillage or runoff entering drains, sewers or watercourses. When heated and in case of fire, toxic vapours/gases may be formed.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon. Sulphur.

5.3. Advice for firefighters

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Protective actions during firefighting	No action shall be taken without appropriate training or involving any personal risk. Contain and collect extinguishing water. Evacuate area.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Do not touch or walk into spilled material. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Harmful to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Stop leak if safe to do so. Move containers from spillage area. Approach the spillage from upwind. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. For waste disposal, see Section 13.
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours and spray/mists. Avoid release to the environment. If ventilation is inadequate, suitable respiratory protection must be worn. Store in tightly-closed, original container. Container must be kept tightly closed when not in use. Avoid contact with alkalis. Product residues retained in emptied containers can be hazardous. Do not reuse empty containers.
Advice on general occupational hygiene	Do not eat, drink or smoke when using this product. Wash after use and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures between 30°C/86°F and 40°C/104°F. Avoid exposure to high temperatures or direct sunlight. Store away from incompatible materials (see Section 10). Keep away from food and drink. Store locked up. Avoid contact with alkalis. Container must be kept tightly closed when not in use. Keep containers upright. Only store in correctly labelled containers. Use appropriate containment to avoid environmental contamination.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

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Ingredient comments No exposure limits known for ingredient(s).

DNEL

Workers - Dermal; Long term systemic effects: 170 mg/kg
 Workers - Inhalation; Long term systemic effects: 12 mg/m³
 Workers - Inhalation; Long term local effects: 12 mg/m³
 Consumer - Dermal; Long term systemic effects: 85 mg/m³
 Consumer - Inhalation; Long term systemic effects: 3 mg/m³
 Consumer - Oral; Long term systemic effects: 0.85 mg/kg
 Consumer - Inhalation; Long term local effects: 3 mg/m³

PNEC

- Fresh water; 0.287 mg/l
- marine water; 0.0287 mg/l
- Intermittent release; 0.0167 mg/l
- STP; 3.43 mg/l
- Sediment (Freshwater); 0.287 mg/kg
- Sediment (Marinewater); 0.287 mg/kg
- Soil; 35 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Wear chemical splash goggles. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures

When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/141/145/143/149

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Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Dark brown.
Odour	Acrid.
Odour threshold	No information available.
pH	pH (diluted solution): 1-2 (1% w/w)
Melting point	6.35°C
Initial boiling point and range	190°C
Flash point	193°C Pensky-Martens closed cup.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	The following materials may react with the product: Alkalies. Metal oxides. Carbonates
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.05 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water. Soluble in the following materials: Methanol.
Partition coefficient	log Pow: 3.32
Auto-ignition temperature	380°C
Decomposition Temperature	No information available.
Viscosity	1250 cP @ 20°C
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.

9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.

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Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No test data specifically related to reactivity available for this product or its ingredients.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
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10.4. Conditions to avoid

Conditions to avoid	The following materials may react with the product: Alkalis. Metal oxides. Carbonates
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10.5. Incompatible materials

Materials to avoid	Alkalis. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon. Sulphur.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD ₅₀)	LD ₅₀ 1350-1470 mg/kg, Oral, Rat Harmful if swallowed.
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ATE oral (mg/kg)	505.05
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Acute toxicity - dermal

Notes (dermal LD ₅₀)	LD ₅₀ >2000 mg/kg, Dermal, Rabbit
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Skin corrosion/irritation

Animal data	Causes severe burns. Corrosive to skin. Rabbit
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	No information available.
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Germ cell mutagenicity

Genotoxicity - in vitro	No information available.
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Carcinogenicity

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Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Gas or vapour may irritate the respiratory system.

Ingestion Harmful if swallowed. Overexposure may cause the following adverse effects: Stomach pain.

Skin contact Causes severe burns. Overexposure may cause the following adverse effects: Pain or irritation. Redness. Blistering may occur.

Eye contact Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns. Overexposure may cause the following adverse effects: Pain. Redness. Profuse watering of the eyes.

Toxicological information on ingredients.

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Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 300-2000 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rat

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not applicable.

Inhalation May cause respiratory system irritation.

Ingestion Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.

Skin contact Causes burns.

Eye contact Irritation of eyes and mucous membranes. May cause chemical eye burns.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Ecotoxicity Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Toxicity Harmful to aquatic life.

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: 1.67 mg/l, *Lepomis macrochirus* (Bluegill)
LC50, 96 hours: > 1 mg/l, *Brachydanio rerio* (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 2.9 mg/l, *Daphnia magna*

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable.

Biodegradation This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.
Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Persistence and degradability

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12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient log Pow: 3.32

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient log Pow: 2.0

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not determined.

Ecological information on ingredients.

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERIVS

General

Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID) 2586

UN No. (IMDG) 2586

UN No. (ICAO) 2586

UN No. (ADN) 2586

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ALKYLSULPHONIC ACIDS, LIQUID
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Proper shipping name (IMDG) ALKYL SULPHONIC ACIDS, LIQUID

Proper shipping name (ICAO) ALKYL SULPHONIC ACIDS, LIQUID

Proper shipping name (ADN) ALKYL SULPHONIC ACIDS, LIQUID

14.3. Transport hazard class(es)

ADR/RID class	8
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ADR/RID classification code C3

ADR/RID label	8
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IMDG class 8

ICAO class/division 8

ADN class 8

Transport labels



14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ICAO packing group III

ADN packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

IMDG Code segregation group	1. Acids
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EmS F-A, S-B

ADR transport category 3

Emergency Action Code 2X

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Hazard Identification Number 80
(ADR/RID)

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Health and environmental listings

The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDL

All the ingredients are listed or exempt.
DSL

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

New Zealand - NZIOC

All the ingredients are listed or exempt.

SECTION 16: Other information

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

09/10/2019

Version number

3.000

Supersedes date

01/10/2018

SDS number

52950

BENZENESULPHONIC ACID 4 C10 - 13 SEC-ALKYL DERVIS

SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H412 Harmful to aquatic life with long lasting effects.
Signature	Lisa Bland



Exposure scenario Manufacture of Substance

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Manufacture of Substance
Product category	PC3 Air care products. PC8 Biocidal products PC19 Intermediate. PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents PC21 Laboratory chemicals. PC32 Polymer preparations and compounds. PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU3 Industrial uses
Sector of use	SU1 Agriculture, forestry, fishery SU6a Manufacture of wood and wood products SU6b Manufacture of pulp, paper and paper products SU8 Manufacture of bulk, large-scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals SU12 Manufacture of plastics products, including compounding and conversion

Environment

Environmental release category	ERC1 Manufacture of the substance
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Worker

Manufacture of Substance

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 45000 tonnes
Maximum daily site tonnage: 150000 kg

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.000001
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.001
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
Technical measures	Handle substance within a closed system. Lye scrubber for neutralisation of acidic waste gases. Electrostatic precipitation for dust collection.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 79%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.01 Pa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Manufacture of Substance

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Environmental exposure STP: Exposure 0.197 mg/l, PNEC 3.43 mg/l, RCR 0.0574
Fresh water: Exposure 0.085 mg/l, PNEC 0.268 mg/l, RCR 0.317
freshwater sediment: Exposure 5.30 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654
Soil: Exposure 1.40 mg/kg, PNEC 35 mg/kg, RCR 0.04
Marine water: Exposure 0.0085 mg/l, PNEC 0.0268 mg/l, RCR 0.317
marine sediment: Exposure 0.530 mg/kg, PNEC 6.8 mg/kg, RCR 0.079

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Manufacture of Substance

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.134 mg/m³, DNEL 12 mg/m³, RCR 0.0111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Formulation with Substance (liquids) - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Formulation with Substance (liquids) - Industrial use
Product category	PC8 Biocidal products PC9a Coatings and paints, thinners, paint removers. PC19 Intermediate. PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents PC23 Leather treatment products PC28 Perfumes, fragrances. PC29 Pharmaceuticals PC34 Textile dyes and impregnating products PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU3 Industrial uses
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging
<u>Environment</u>	
Environmental release category	ERC2 Formulation into mixture
<u>Worker</u>	

Formulation with Substance (liquids) - Industrial use

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC13 Treatment of articles by dipping and pouring. PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 107500 tonnes
Maximum daily site tonnage: 16700 kg
Fraction of Regional tonnage used locally: 0.0342

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.001
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
Technical measures	Handle substance within a closed system.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Formulation with Substance (liquids) - Industrial use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure STP: Exposure 1.02 mg/l, PNEC 3.43 mg/l, RCR 0.296
Fresh water: Exposure 0.102 mg/l, PNEC 0.268 mg/l, RCR 0.380
freshwater sediment: Exposure 5.30 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654
Soil: Exposure 1.09 mg/kg, PNEC 35 mg/kg, RCR 0.0311
Marine water: Exposure 0.0102 mg/l, PNEC 0.0268 mg/l, RCR 0.380
marine sediment: Exposure 0.530 mg/kg, PNEC 8.1 mg/kg, RCR 0.380

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Formulation with Substance (liquids) - Industrial use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.134 mg/m³, DNEL 12 mg/m³, RCR 0.0111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC7 Industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 42.9 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.252

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Formulation with Substance (powders and granules) - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Formulation with Substance (powders and granules) - Industrial use
Product category	PC28 Perfumes, fragrances. PC29 Pharmaceuticals PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU3 Industrial uses
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging
<u>Environment</u>	
Environmental release category	ERC2 Formulation into mixture
<u>Worker</u>	

Formulation with Substance (powders and granules) - Industrial use

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC13 Treatment of articles by dipping and pouring. PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 107500 tonnes
Maximum daily site tonnage: 16700 kg
Fraction of Regional tonnage used locally: 0.0342

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.0002
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.0001
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
Technical measures	Handle substance within a closed system.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Solid, low dustiness
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Formulation with Substance (powders and granules) - Industrial use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model.
Environmental exposure	STP: Exposure 1.02 mg/l, PNEC 3.43 mg/l, RCR 0.296 Fresh water: Exposure 0.0102 mg/l, PNEC 0.268 mg/l, RCR 0.0380 freshwater sediment: Exposure 5.30 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654 Soil: Exposure 1.12 mg/kg, PNEC 35 mg/kg, RCR 0.0321 Marine water: Exposure 0.00102 mg/l, PNEC 0.0268 mg/l, RCR 0.0380 marine sediment: Exposure 0.0530 mg/kg, PNEC 8.1 mg/kg, RCR 0.0380

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Formulation with Substance (powders and granules) - Industrial use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.00100 mg/m³, DNEL 12 mg/m³, RCR 0.000833

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.000833

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00202

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC7 Industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 42.9 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.252

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC14 Tabletting, compression, extrusion, pelletisation, granulation

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 3.43 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0202

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Formulation with Substance (powders and granules) - Industrial use

Worker - inhalation, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Washing and Cleaning Products (liquids) - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Washing and Cleaning Products (liquids) - Industrial use
Product category	PC24 Lubricants, greases and release products. PC35 Washing and cleaning products
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
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Use in Washing and Cleaning Products (liquids) - Industrial use

2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 19780 tonnes
Maximum daily site tonnage: 50000 kg
Fraction of Regional tonnage used locally: 0.005

Frequency and duration of use

Emission days: 20 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.300
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.0001
Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
Dispose of waste product or used containers according to local regulations
Technical measures Handle substance within a closed system.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 25 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Use in Washing and Cleaning Products (liquids) - Industrial use

Environmental exposure

STP: Exposure 0.0304 mg/l, PNEC 3.43 mg/l, RCR 0.00887
Fresh water: Exposure 0.00588 mg/l, PNEC 0.268 mg/l, RCR 0.0219
freshwater sediment: Exposure 0.305 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0377
Soil: Exposure 0.458 mg/kg, PNEC 35 mg/kg, RCR 0.0106
Marine water: Exposure 0.000752 mg/l, PNEC 0.0268 mg/l, RCR 0.0280
marine sediment: Exposure 0.0390 mg/kg, PNEC 8.1 mg/kg, RCR 0.0280

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method

Used ECETOC TRA model.

Use in Washing and Cleaning Products (liquids) - Industrial use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0801 mg/m³, DNEL 12 mg/m³, RCR 0.0068

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC7 Industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 42.9 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.252

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC11 Non industrial spraying

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Washing and Cleaning Products (powders and granules) - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Washing and Cleaning Products (powders and granules) - Industrial use
Product category	PC24 Lubricants, greases and release products. PC35 Washing and cleaning products
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
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Use in Washing and Cleaning Products (powders and granules) - Industrial use

2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 19780 tonnes
Maximum daily site tonnage: 50000 kg
Fraction of Regional tonnage used locally: 0.005

Frequency and duration of use

Emission days: 20 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.3
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.0001
Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
Dispose of waste product or used containers according to local regulations
Technical measures Handle substance within a closed system.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Solid, low dustiness
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Use in Washing and Cleaning Products (powders and granules) - Industrial use

Environmental exposure

STP: Exposure 0.0304 mg/l, PNEC 3.43 mg/l, RCR 0.00887
Fresh water: Exposure 0.00588 mg/l, PNEC 0.268 mg/l, RCR 0.0219
freshwater sediment: Exposure 0.305 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0377
Soil: Exposure 0.458 mg/kg, PNEC 35 mg/kg, RCR 0.0106
Marine water: Exposure 0.000752 mg/l, PNEC 0.0268 mg/l, RCR 0.0280
marine sediment: Exposure 0.0390 mg/kg, PNEC 8.1 mg/kg, RCR 0.0280

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method

Used ECETOC TRA model.

Use in Washing and Cleaning Products (powders and granules) - Industrial use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.000833

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00202

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC7 Industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 42.9 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.252

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic, Worker - dermal, long-term - local and systemic: Exposure 107 mg/m³, DNEL 170 mg/m³, RCR 0.630

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

Use in Washing and Cleaning Products (powders and granules) - Industrial use

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Plant Protection Products - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Plant Protection Products - Industrial use
Product category	PC12 Lawn and garden preparations (- fertilizers). PC27 Plant protection products.
Main sector	SU3 Industrial uses
Sector of use	SU1 Agriculture, forestry, fishery
<u>Environment</u>	
Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
<u>Worker</u>	
Process category	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC11 Non industrial spraying

2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Use in Plant Protection Products - Industrial use

Annual amount used in the EU: 860 tonnes
 Maximum daily site tonnage: 5 kg
 Fraction of Regional tonnage used locally: 0.002

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.300
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.0001
Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
 Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
 Dispose of waste product or used containers according to local regulations

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 5 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.
Environmental exposure STP: Exposure 0.0287 mg/l, PNEC 3.43 mg/l, RCR 0.00836
 Fresh water: Exposure 0.00319 mg/l, PNEC 0.268 mg/l, RCR 0.0119
 freshwater sediment: Exposure 0.166 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0205
 Soil: Exposure 0.0339 mg/kg, PNEC 35 mg/kg, RCR 0.000968
 Marine water: Exposure 0.000320 mg/l, PNEC 0.0268 mg/l, RCR 0.0120
 marine sediment: Exposure 0.0166 mg/kg, PNEC 8.1 mg/kg, RCR 0.0120

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use in Plant Protection Products - Industrial use

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
Exposure	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223 Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202 PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223 Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223 Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403 PROC11 Non industrial spraying Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Textile and Leather Finishing Products - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Textile and Leather Finishing Products - Industrial use
Product category	PC23 Leather treatment products PC24 Lubricants, greases and release products. PC34 Textile dyes and impregnating products
Main sector	SU3 Industrial uses
Sector of use	SU5 Manufacture of textiles, leather, fur

Environment

Environmental release category	ERC2 Formulation into mixture
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Worker

Process category	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC6 Calendering operations. PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations
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Use in Textile and Leather Finishing Products - Industrial use

2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 430 tonnes
Maximum daily site tonnage: 1000 kg
Fraction of Regional tonnage used locally: 0.2

Frequency and duration of use

Emission days: 86 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.00500
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.950
Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 0.00500

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
Dispose of waste product or used containers according to local regulations

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 79%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 25 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.
Environmental exposure STP: Exposure 0.197 mg/l, PNEC 3.43 mg/l, RCR 0.0574
Fresh water: Exposure 0.0850 mg/l, PNEC 0.268 mg/l, RCR 0.0119
freshwater sediment: Exposure 5.30 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654
Soil: Exposure 1.40 mg/kg, PNEC 35 mg/kg, RCR 0.0400
Marine water: Exposure 0.00850 mg/l, PNEC 0.0268 mg/l, RCR 0.317
marine sediment: Exposure 0.530 mg/kg, PNEC 8.1 mg/kg, RCR 0.00779

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use in Textile and Leather Finishing Products - Industrial use

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
Exposure	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668 Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202 PROC4 Chemical production where opportunity for exposure arises PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668 Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403 PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC13 Treatment of articles by dipping and pouring. Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668 Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807 PROC6 Calendering operations. PROC10 Roller application or brushing PROC14 Tableting, compression, extrusion, pelletisation, granulation Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668 Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161 PROC7 Industrial spraying Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668 Worker - dermal, long-term - local and systemic: Exposure 42.9 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.252

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use as Processing Aid in Emulsion Polymerisation

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use as Processing Aid in Emulsion Polymerisation
Product category	PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents PC21 Laboratory chemicals. PC32 Polymer preparations and compounds.
Main sector	SU3 Industrial uses
Sector of use	SU12 Manufacture of plastics products, including compounding and conversion

Environment

Environmental release category	ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
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Worker

Process category	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC17 Lubrication at high energy conditions in metal working operations
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Use as Processing Aid in Emulsion Polymerisation

Annual amount used in the EU: 27520 tonnes
 Maximum daily site tonnage: 50000 kg
 Fraction of Regional tonnage used locally: 0.545

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.0200
Emission factor - water Not applicable as there is no release to wastewater.
Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 0.0000500

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
 Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
 Dispose of waste product or used containers according to local regulations

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 25 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.
Environmental exposure STP: Exposure 0 mg/l, PNEC 3.43 mg/l, RCR 0
 Fresh water: Exposure 0.000263 mg/l, PNEC 0.268 mg/l, RCR 0.000981
 freshwater sediment: Exposure 0.0136 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.00168
 Soil: Exposure 2.37 mg/kg, PNEC 35 mg/kg, RCR 0.0361
 Marine water: Exposure 0.0000415 mg/l, PNEC 0.0268 mg/l, RCR 0.00155
 marine sediment: Exposure 0.00215 mg/kg, PNEC 8.1 mg/kg, RCR 0.00155

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use as Processing Aid in Emulsion Polymerisation

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method

Used ECETOC TRA model.

Exposure

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Glues - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Glues - Industrial use
Product category	PC1 Adhesives, sealants.
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC6a Use of intermediate
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Worker

Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact PROC25 Other hot work operations with metals
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Use in Glues - Industrial use

Annual amount used in the EU: 172 tonnes
 Maximum daily site tonnage: 782 kg
 Fraction of Regional tonnage used locally: 1

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.00600
Emission factor - water Not applicable as there is no release to wastewater.
Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
 Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
 Dispose of waste product or used containers according to local regulations

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 5 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure STP: Exposure 0 mg/l, PNEC 3.43 mg/l, RCR 0
 Fresh water: Exposure 0.00000493 mg/l, PNEC 0.268 mg/l, RCR 0.00000184
 freshwater sediment: Exposure 0.0000256 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.00000316
 Soil: Exposure 0.0692 mg/kg, PNEC 35 mg/kg, RCR 0.00198
 Marine water: Exposure 0.000000777 mg/l, PNEC 0.0268 mg/l, RCR 0.0000029
 marine sediment: Exposure 0.00000403 mg/kg, PNEC 8.1 mg/kg, RCR 0.0000029

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use in Glues - Industrial use

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method

Used ECETOC TRA model.

Exposure

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC19 Manual activities involving hand contact

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 141 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.832

PROC25 Other hot work operations with metals

Worker - dermal, long-term - local and systemic: Exposure 0.283 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00166

4. Guidance to check compliance with the exposure scenario (Health 1)

Use in Glues - Industrial use

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Formulation with Substances (liquids) - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Formulation with Substances (liquids) - Professional use
Product category	PC28 Perfumes, fragrances. PC29 Pharmaceuticals PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU22 Professional uses
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging

Environment

Environmental release category	ERC2 Formulation into mixture
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Worker

Formulation with Substances (liquids) - Professional use

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 107500 tonnes
 Maximum daily site tonnage: 4500 kg
 Fraction of Regional tonnage used locally: 0.0092

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.002
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
Technical measures	Handle substance within a closed system.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Formulation with Substances (liquids) - Professional use

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure STP: Exposure 0.548 mg/l, PNEC 3.43 mg/l, RCR 0.160
Fresh water: Exposure 0.0554 mg/l, PNEC 0.268 mg/l, RCR 0.207
freshwater sediment: Exposure 2.88 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.355
Soil: Exposure 0.586 mg/kg, PNEC 35 mg/kg, RCR 0.0167
Marine water: Exposure 0.00554 mg/l, PNEC 0.0268 mg/l, RCR 0.207
marine sediment: Exposure 0.288 mg/kg, PNEC 8.1 mg/kg, RCR 0.207

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Formulation with Substances (liquids) - Professional use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.134 mg/m³, DNEL 12 mg/m³, RCR 0.0111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC14 Tableting, compression, extrusion, pelletisation, granulation

Worker - inhalation, long-term - local and systemic: Exposure 1.34 mg/m³, DNEL 12 mg/m³, RCR 0.111

Worker - dermal, long-term - local and systemic: Exposure 3.43 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0202

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Formulation with Substance (powder and granules) - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Formulation with Substance (powder and granules) - Professional use
Product category	PC28 Perfumes, fragrances. PC29 Pharmaceuticals PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU3 Industrial uses
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging
<u>Environment</u>	
Environmental release category	ERC2 Formulation into mixture
<u>Worker</u>	

Formulation with Substance (powder and granules) - Professional use

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 107500 tonnes
 Maximum daily site tonnage: 4500 kg
 Fraction of Regional tonnage used locally: 0.0092

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.0002
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.0001
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
Technical measures	Handle substance within a closed system.

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Solid, low dustiness
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Formulation with Substance (powder and granules) - Professional use

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure

STP: Exposure 0.274 mg/l, PNEC 3.43 mg/l, RCR 0.0799

Fresh water: Exposure 0.0277 mg/l, PNEC 0.268 mg/l, RCR 0.103

freshwater sediment: Exposure 1.44 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.178

Soil: Exposure 0.295 mg/kg, PNEC 35 mg/kg, RCR 0.00842

Marine water: Exposure 0.00277 mg/l, PNEC 0.0268 mg/l, RCR 0.103

marine sediment: Exposure 0.144 mg/kg, PNEC 8.1 mg/kg, RCR 0.103

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Formulation with Substance (powder and granules) - Professional use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.000833

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.000833

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00202

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.00417

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC14 Tableting, compression, extrusion, pelletisation, granulation

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 3.43 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0202

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Use in Washing and Cleaning Products (liquids) - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Washing and Cleaning Products (liquids) - Professional use
Product category	PC3 Air care products. PC24 Lubricants, greases and release products. PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
<u>Worker</u>	

Use in Washing and Cleaning Products (liquids) - Professional use

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 10320 tonnes
Maximum daily site tonnage: 14 kg
Fraction of Regional tonnage used locally: 0.0005

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.990
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.01

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 79%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 25 %.

Frequency and duration of use

Use in Washing and Cleaning Products (liquids) - Professional use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model.
Environmental exposure	STP: Exposure 0.00700 mg/l, PNEC 3.43 mg/l, RCR 0.00204 Fresh water: Exposure 0.0240 mg/l, PNEC 0.268 mg/l, RCR 0.00.0894 freshwater sediment: Exposure 6.08 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.750 Soil: Exposure 0.187 mg/kg, PNEC 35 mg/kg, RCR 0.00534 Marine water: Exposure 0.00241 mg/l, PNEC 0.0268 mg/l, RCR 0.0898 marine sediment: Exposure 0.610 mg/kg, PNEC 8.1 mg/kg, RCR 0.0898

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Use in Washing and Cleaning Products (liquids) - Professional use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0801 mg/m³, DNEL 12 mg/m³, RCR 0.0068

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

PROC13 Treatment of articles by dipping and pouring.

Worker - dermal, long-term - local and systemic: Exposure 0.137 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

4. Guidance to check compliance with the exposure scenario (Health 1)

Use in Washing and Cleaning Products (liquids) - Professional use

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario
Use in Washing and Cleaning Products (powder and granules) - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Washing and Cleaning Products (powder and granules) - Professional use
Product category	PC3 Air care products. PC24 Lubricants, greases and release products. PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
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Worker

Use in Washing and Cleaning Products (powder and granules) - Professional use

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 10320 tonnes
 Maximum daily site tonnage: 14 kg
 Fraction of Regional tonnage used locally: 0.0005

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.990
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.0100

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 79%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Solid, low dustiness
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 100 %.

Frequency and duration of use

Use in Washing and Cleaning Products (powder and granules) - Professional use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle substance within a closed system. Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure STP: Exposure 0.00700 mg/l, PNEC 3.43 mg/l, RCR 0.00204
 Fresh water: Exposure 0.0240 mg/l, PNEC 0.268 mg/l, RCR 0.0894
 freshwater sediment: Exposure 6.08 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.750
 Soil: Exposure 0.187 mg/kg, PNEC 35 mg/kg, RCR 0.00534
 Marine water: Exposure 0.00241 mg/l, PNEC 0.0268 mg/l, RCR 0.0898
 marine sediment: Exposure 0.610 mg/kg, PNEC 8.1 mg/kg, RCR 0.0898

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Use in Washing and Cleaning Products (powder and granules) - Professional use

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.00833

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.0100 mg/m³, DNEL 12 mg/m³, RCR 0.000833

Worker - dermal, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.100 mg/m³, DNEL 12 mg/m³, RCR 0.00202

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³, RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 1.00 mg/m³, DNEL 12 mg/m³, RCR 0.0833

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0630

PROC19 Manual activities involving hand contact

Worker - inhalation, long-term - local and systemic: Exposure 0.500 mg/m³, DNEL 12 mg/m³,

Use in Washing and Cleaning Products (powder and granules) - Professional use

RCR 0.0417

Worker - dermal, long-term - local and systemic: Exposure 141 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.832

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Glues - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Glues - Professional use
Product category	PC1 Adhesives, sealants.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
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Worker

Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact PROC25 Other hot work operations with metals
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Use in Glues - Professional use

Annual amount used in the EU: 129 tonnes
 Maximum daily site tonnage: 1 kg
 Fraction of Regional tonnage used locally: 0.002

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.009
Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
 Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
 Dispose of waste product or used containers according to local regulations

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Solid, low dustiness
Concentration details Covers concentrations up to 5 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Handle all packages and containers carefully to minimise spills. Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure STP: Exposure 0.0000387 mg/l, PNEC 3.43 mg/l, RCR 0.0000113
 Fresh water: Exposure 0.00000425 mg/l, PNEC 0.268 mg/l, RCR 0.0000159
 freshwater sediment: Exposure 0.000221 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0000273
 Soil: Exposure 0.0000414 mg/kg, PNEC 35 mg/kg, RCR 0.00000118
 Marine water: Exposure 0.000000424 mg/l, PNEC 0.0268 mg/l, RCR 0.0000158
 marine sediment: Exposure 0.0000220 mg/kg, PNEC 8.1 mg/kg, RCR 0.0000158

4. Guidance to check compliance with the exposure scenario (Environment 1)

Use in Glues - Professional use

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method

Used ECETOC TRA model.

Exposure

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - inhalation, long-term - local and systemic: Exposure 1.37 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00807

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 0.343 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00202

PROC4 Chemical production where opportunity for exposure arises

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC19 Manual activities involving hand contact

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 141 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.832

PROC25 Other hot work operations with metals

Worker - dermal, long-term - local and systemic: Exposure 0.283 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.00166

4. Guidance to check compliance with the exposure scenario (Health 1)

Use in Glues - Professional use

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Textile and Leather Finishing Products - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Textile and Leather Finishing Products - Professional use
Product category	PC23 Leather treatment products PC24 Lubricants, greases and release products.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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Worker

Process category	PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 430 tonnes
Maximum daily site tonnage: 2 kg
Fraction of Regional tonnage used locally: 0.002

Frequency and duration of use

Emission days: 365 days/year

Use in Textile and Leather Finishing Products - Professional use

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.00
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.00
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.200

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 25 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
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Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Handle all packages and containers carefully to minimise spills. Clear spills immediately.
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3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model.
Environmental exposure	STP: Exposure 0.0143 mg/l, PNEC 3.43 mg/l, RCR 0.00418 Fresh water: Exposure 0.00160 mg/l, PNEC 0.268 mg/l, RCR 0.00596 freshwater sediment: Exposure 0.0829 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0102 Soil: Exposure 0.0169 mg/kg, PNEC 35 mg/kg, RCR 0.000484 Marine water: Exposure 0.000160 mg/l, PNEC 0.0268 mg/l, RCR 0.00598 marine sediment: Exposure 0.00831 mg/kg, PNEC 8.1 mg/kg, RCR 0.00598

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Use in Textile and Leather Finishing Products - Professional use

Exposure

PROC7 Industrial spraying

PROC13 Treatment of articles by dipping and pouring.

Worker - dermal, long-term - local and systemic: Exposure 42.9 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.252

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Biocidal Products - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Biocidal Products - Professional use
Product category	PC8 Biocidal products
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
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Worker

Process category	PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 860 tonnes
Maximum daily site tonnage: 5 kg
Fraction of Regional tonnage used locally: 0.002

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.00
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.00

Use in Biocidal Products - Professional use

Emission factor - soil Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

Good practice Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil.
Dispose of waste product or used containers according to local regulations

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water Provide onsite wastewater removal efficiency of 88%.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid
Vapour pressure Vapour pressure < 0.5 kPa at STP.
Concentration details Covers concentrations up to 25 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Clear spills immediately.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model.

Environmental exposure STP: Exposure 0.0287 mg/l, PNEC 3.43 mg/l, RCR 0.00836
Fresh water: Exposure 0.00319 mg/l, PNEC 0.268 mg/l, RCR 0.0119
freshwater sediment: Exposure 0.166 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0205
Soil: Exposure 0.0339 mg/kg, PNEC 35 mg/kg, RCR 0.000968
Marine water: Exposure 0.000320 mg/l, PNEC 0.0268 mg/l, RCR 0.0120
marine sediment: Exposure 0.0166 mg/kg, PNEC 8.1 mg/kg, RCR 0.0120

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Use in Biocidal Products - Professional use

Exposure

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Plant Protection Products - Professional use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Plant Protection Products - Professional use
Product category	PC27 Plant protection products.
Main sector	SU22 Professional uses
Sector of use	SU1 Agriculture, forestry, fishery

Environment

Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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Worker

Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC11 Non industrial spraying
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 860 tonnes
Maximum daily site tonnage: 5 kg
Fraction of Regional tonnage used locally: 0.002

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Use in Plant Protection Products - Professional use

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.00
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.00
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.200

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 5 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
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Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Handle all packages and containers carefully to minimise spills. Clear spills immediately.
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3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model.
Environmental exposure	STP: Exposure 0.0287 mg/l, PNEC 3.43 mg/l, RCR 0.00836 Fresh water: Exposure 0.00319 mg/l, PNEC 0.268 mg/l, RCR 0.0119 freshwater sediment: Exposure 0.166 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0205 Soil: Exposure 0.0339 mg/kg, PNEC 35 mg/kg, RCR 0.000968 Marine water: Exposure 0.000320 mg/l, PNEC 0.0268 mg/l, RCR 0.0120 marine sediment: Exposure 0.0166 mg/kg, PNEC 8.1 mg/kg, RCR 0.0120

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Use in Plant Protection Products - Professional use

Exposure

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Washing and Cleaning Products (liquids) - Consumer use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Washing and Cleaning Products (liquids) - Consumer use
Product category	PC3 Air care products. PC8 Biocidal products PC14 Metal surface treatment products PC15 Non-metal-surface treatment products. PC24 Lubricants, greases and release products. PC31 Polishes and wax blends. PC35 Washing and cleaning products
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Amounts used

Annual amount used in the EU: 174150 tonnes
Maximum daily site tonnage: 239 kg
Fraction of EU tonnage used in region: 0.0005

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
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Use in Washing and Cleaning Products (liquids) - Consumer use

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.990

Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 0.0100

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

STP details Removal efficiency (total): 79%

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 30 %.

Other given operational conditions affecting Non-industrial exposure

Setting Indoor use.

Ventilation rate Covers use under typical household ventilation.

3. Exposure estimation (Environment 1)

Assessment method The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.

Environmental exposure STP: Exposure 0.197 mg/l, PNEC 3.43 mg/l, RCR 0.00574
Fresh water: Exposure 0.0850 mg/l, PNEC 0.268 mg/l, RCR 0.317
freshwater sediment: Exposure 5.30 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654
Soil: Exposure 1.40 mg/kg, PNEC 35 mg/kg, RCR 0.0400
Marine water: Exposure 0.00850 mg/l, PNEC 0.0268 mg/l, RCR 0.317
marine sediment: Exposure 0.530 mg/kg, PNEC 8.1 mg/kg, RCR 0.0779

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.

Exposure Consumer - oral, long-term - local and systemic: Exposure 0.00194 mg/kg/day, DNEL 0.85 mg/kg/day, RCR 0.00228
Consumer - dermal: Exposure 0.832 mg/kg/day, DNEL 85 mg/kg/day, RCR 0.00979
Consumer - inhalation: Exposure 0.0000131 mg/m³, DNEL 3 mg/m³, RCR 0.00000437

Worst case assumption

4. Guidance to check compliance with the exposure scenario (Health 1)

Use in Washing and Cleaning Products (liquids) - Consumer use

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Washing and Cleaning Products (powders and granules) - Consumer use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Washing and Cleaning Products (powders and granules) - Consumer use
Product category	PC3 Air care products. PC8 Biocidal products PC14 Metal surface treatment products PC15 Non-metal-surface treatment products. PC24 Lubricants, greases and release products. PC31 Polishes and wax blends. PC35 Washing and cleaning products
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Amounts used

Annual amount used in the EU: 178450 tonnes
Maximum daily site tonnage: 244 kg
Fraction of EU tonnage used in region: 0.0005

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
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Use in Washing and Cleaning Products (powders and granules) - Consumer use

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.990

Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 0.0100

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10 (Default)
Local marine water dilution factor: 100 (Default)

Risk management measures

STP details Removal efficiency (total): 79%

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state Solid

Concentration details Covers concentrations up to 60 %.

Other given operational conditions affecting Non-industrial exposure

Setting Indoor use.

Ventilation rate Covers use under typical household ventilation.

3. Exposure estimation (Environment 1)

Assessment method The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.

Environmental exposure STP: Exposure 0.197 mg/l, PNEC 3.43 mg/l, RCR 0.00574
Fresh water: Exposure 0.0850 mg/l, PNEC 0.268 mg/l, RCR 0.317
freshwater sediment: Exposure 5.30 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654
Soil: Exposure 1.40 mg/kg, PNEC 35 mg/kg, RCR 0.0400
Marine water: Exposure 0.00850 mg/l, PNEC 0.0268 mg/l, RCR 0.317
marine sediment: Exposure 0.530 mg/kg, PNEC 8.1 mg/kg, RCR 0.0779

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.

Exposure Consumer - dermal: Exposure 8.12 mg/kg/day, DNEL 85 mg/kg/day, RCR 0.0955
Consumer - inhalation: Exposure 0.0000000103 mg/m³, DNEL 3 mg/m³, RCR 0.00000000343
Worst case assumption

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Glues - Consumer use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Glues - Consumer use
Product category	PC1 Adhesives, sealants.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC10b Widespread use of articles with high or intended release (outdoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Amounts used

Annual amount used in the EU: 129 tonnes
Maximum daily site tonnage: 1 kg
Fraction of EU tonnage used in region: 0.002

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.00
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.00
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 1.00

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Use in Glues - Consumer use

Risk management measures

STP details Removal efficiency (total): 88%

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Concentration of substance in product: 5%

Other given operational conditions affecting Non-industrial exposure

Setting Indoor use.

Ventilation rate Covers use under typical household ventilation.

3. Exposure estimation (Environment 1)

Assessment method The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.

Environmental exposure STP: Exposure 0.00430 mg/l, PNEC 3.43 mg/l, RCR 0.0157
 Fresh water: Exposure 0.000480 mg/l, PNEC 0.268 mg/l, RCR 0.0254
 freshwater sediment: Exposure 0.049 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0435
 Soil: Exposure 0.00508 mg/kg, PNEC 35 mg/kg, RCR 0.00164
 Marine water: Exposure 0.0000481 mg/l, PNEC 0.0268 mg/l, RCR 0.0251
 marine sediment: Exposure 0.00250 mg/kg, PNEC 8.1 mg/kg, RCR 0.0251

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.

Exposure Consumer - dermal: Exposure 0.00876 mg/kg/day, DNEL 85 mg/kg/day, RCR 0.000103
 Consumer - inhalation: Exposure 0.0000000106 mg/m³, DNEL 3 mg/m³, RCR 0.00000000353

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Textile and Leather Finishing Products - Consumer use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Textile and Leather Finishing Products - Consumer use
Product category	PC23 Leather treatment products PC34 Textile dyes and impregnating products
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC11b Widespread use of articles with high or intended release (indoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Amounts used

Annual amount used in the EU: 430 tonnes
Maximum daily site tonnage: 2 kg
Fraction of EU tonnage used in region: 0.002

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.00
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.00
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Use in Textile and Leather Finishing Products - Consumer use

Dilution	Local freshwater dilution factor: 10 (Default)
	Local marine water dilution factor: 100 (Default)

Risk management measures

STP details	Removal efficiency (total): 88%
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2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state	Liquid, vapour pressure < 0.5 kPa at STP
Concentration details	Concentration of substance in product: 25%

Other given operational conditions affecting Non-industrial exposure

Setting	Indoor use.
Ventilation rate	Covers use under typical household ventilation.

3. Exposure estimation (Environment 1)

Assessment method	The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.
Environmental exposure	STP: Exposure 0.0143 mg/l, PNEC 3.43 mg/l, RCR 0.00418 Fresh water: Exposure 0.00160 mg/l, PNEC 0.268 mg/l, RCR 0.00596 freshwater sediment: Exposure 0.0828 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0102 Soil: Exposure 0.0169 mg/kg, PNEC 35 mg/kg, RCR 0.000484 Marine water: Exposure 0.000160 mg/l, PNEC 0.0268 mg/l, RCR 0.00598 marine sediment: Exposure 0.00831 mg/kg, PNEC 8.1 mg/kg, RCR 0.00598

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated.
Exposure	Consumer - dermal: Exposure 0.0395 mg/kg/day, DNEL 85 mg/kg/day, RCR 0.0000372 Consumer - inhalation: Exposure 0.000516 mg/m ³ , DNEL 3 mg/m ³ , RCR 0.000172

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Metalworking - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Metalworking - Industrial use
Product category	PC14 Metal surface treatment products
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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Worker

Process category	PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 430 tonnes
Maximum daily site tonnage: 2497 kg
Fraction of Regional tonnage used locally: 0.9

Frequency and duration of use

Use in Metalworking - Industrial use

Emission days: 155 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.250
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 25 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
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Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Handle all packages and containers carefully to minimise spills. Clear spills immediately.
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3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model.
Environmental exposure	STP: Exposure 0.197 mg/l, PNEC 3.43 mg/l, RCR 0.0574 Fresh water: Exposure 0.0850 mg/l, PNEC 0.268 mg/l, RCR 0.317 freshwater sediment: Exposure 5.3 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.654 Soil: Exposure 1.4 mg/kg, PNEC 35 mg/kg, RCR 0.0400 Marine water: Exposure 0.00850 mg/l, PNEC 0.0268 mg/l, RCR 0.317 marine sediment: Exposure 0.530 mg/kg, PNEC 8.1 mg/kg, RCR 0.0779

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Use in Metalworking - Industrial use

Exposure

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 0.801 mg/m³, DNEL 12 mg/m³, RCR 0.0668

Worker - dermal, long-term - local and systemic: Exposure 27.4 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.161

PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles

Worker - dermal, long-term - local and systemic: Exposure 2.83 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0166

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Concrete Industry - Industrial use

Identification

Product name	Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs.
REACH registration number	01-2119490234-40-XXXX
CAS number	85536-14-7
EC number	287-494-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS@UnivarSolutions.com

1. Title of exposure scenario

Main title	Use in Concrete Industry - Industrial use
Product category	PC14 Metal surface treatment products
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC5 Use at industrial site leading to inclusion into/onto article
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Worker

Process category	PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC11 Non industrial spraying
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Annual amount used in the EU: 430 tonnes
Maximum daily site tonnage: 1955 kg
Fraction of Regional tonnage used locally: 1

Frequency and duration of use

Emission days: 155 days/year

Other given operational conditions affecting environmental exposure

Use in Concrete Industry - Industrial use

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.0170
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0
Emission factor - soil	Not applicable - no direct release to soil.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 (Default) Local marine water dilution factor: 100 (Default)
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Risk management measures

Good practice	Good housekeeping, e.g. inspection procedures, will ensure that there are no leaks to soil. Dispose of waste product or used containers according to local regulations
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Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Water	Provide onsite wastewater removal efficiency of 88%.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure < 0.5 kPa at STP.
Concentration details	Covers concentrations up to 5 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
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Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Handle all packages and containers carefully to minimise spills. Clear spills immediately.
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3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model.
Environmental exposure	STP: Exposure 0 mg/l, PNEC 3.43 mg/l, RCR 0 Fresh water: Exposure 0.000181 mg/l, PNEC 0.268 mg/l, RCR 0.0000130 freshwater sediment: Exposure 0.00000349 mg/kg, PNEC 8.1 mg/kg/day, RCR 0.0000224 Soil: Exposure 0.0941 mg/kg, PNEC 35 mg/kg, RCR 0.00269 Marine water: Exposure 0.000000551 mg/l, PNEC 0.0268 mg/l, RCR 0.0000205 marine sediment: Exposure 0.0000286 mg/kg, PNEC 8.1 mg/kg, RCR 0.0000205

4. Guidance to check compliance with the exposure scenario (Environment 1)

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Use in Concrete Industry - Industrial use

Exposure

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 13.7 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0807

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Worker - inhalation, long-term - local and systemic: Exposure 0.267 mg/m³, DNEL 12 mg/m³, RCR 0.0223

Worker - dermal, long-term - local and systemic: Exposure 6.86 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.0403

PROC11 Non industrial spraying

Worker - dermal, long-term - local and systemic: Exposure 107 mg/kg/day, DNEL 170 mg/kg/day, RCR 0.630

4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.