SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supercedes date 27-Jul-2022 **Revision date** 27-Jul-2022 **Revision Number** 6

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

1.1. Product identifier

Product Code(s)	00514
Safety data sheet number	00514
Product Name	3-BUTOXYPROPAN-2-OL
Index No	603-052-00-8
EC Number	225-878-4
CAS No	5131-66-8
Synonyms	DOWANOL PNB GLYCOL ETHER, PROPYLENE GLYCOL MONOBUTYL ETHER, DOWANOL PNB, PNB
Pure substance/mixture	Substance
Molecular weight	132.2 g/mol

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

Recommended use	Manufacture of substance Formulation or re-packing: Formulation & (re)packing of substances and mixtures. Industrial use Professional use Consumer use Coatings Cleaning agent Cosmetics Personal care Perfumes, fragrances Use in oil and gas field drilling and production operations Additive for Agrochemicals Metal working fluids / rolling oils,
Uses advised against	Food additive

1.3. Details of the supplier of the safety data sheet

Supplier
Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address	SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Signal word
Warning

Hazard statements
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves and eye/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash it before reuse

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
3-BUTOXYPROPAN-2-OL 5131-66-8	> 95.0%	225-878-4 (603-052-00-8)	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice — First aid personnel should wear appropriate protective equipment during any rescue. Use personal protection recommended in Section 8.

Inhalation — IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Eye contact — Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.

Skin contact — IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if symptoms occur. Ensure that eyewash stations and safety showers are close to the workstation location.

Ingestion — Rinse mouth thoroughly with water. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

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

Eyes — Causes serious eye irritation.

Dermal	Causes skin irritation.

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

Note to doctors	Treat symptomatically. Treat any burns as thermal burns, after decontamination.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed. Closed containers can burst violently when heated, due to excess pressure build-up. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids..
Hazardous combustion products	Carbon oxides. Aldehydes. Ketone. Organic Acids.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Remove all sources of ignition. Keep unnecessary and unprotected personnel from entering. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	See Section 8 for information on appropriate personal protective equipment.

6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Pick up and transfer to properly labelled containers. Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Observe good chemical hygiene practices.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Wash skin thoroughly after handling. Never pierce, drill, grind, cut, saw or weld any empty container. Keep away from heat, sparks and open flame. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.
General hygiene considerations	Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. See section 10 for more information.

Packaging materials Suitable container/equipment material:. Carbon Steel. stainless steel. Phenolic lined steel drums.
. Unsuitable container/equipment material. Aluminium. copper. Galvanized iron. Galvanized steel.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits 3-BUTOXYPROPAN-2-OL TWA: 50 ppm (Manuf. Data).

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Information on monitoring procedures Refer to European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) or equivalent national standard(s). Refer to European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) or equivalent national standard(s). Refer to European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) or equivalent national standard(s). Refer also to national guidance documents for information on currently recommended monitoring procedures.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
3-BUTOXYPROPAN-2-OL 5131-66-8		44 mg/kg bw/day [4] [6]	270.50 mg/m^3 [4] [6]

[4] Systemic health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
3-BUTOXYPROPAN-2-OL 5131-66-8	8.75 mg/kg bw/day [4] [6]	16.00 mg/kg bw/day [4] [6]	33.80 mg/m^3 [4] [6]

[4] Systemic health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
3-BUTOXYPROPAN-2-OL 5131-66-8	0.525 mg/L	5.25 mg/L	0.0525 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
3-BUTOXYPROPAN-2-OL 5131-66-8	2.36 mg/kg sediment dw	0.236 mg/kg sediment dw	10 mg/L	0.16 mg/kg soil dw	

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Wear suitable gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Wear protective butyl rubber gloves	> 0.35 mm	> 120 minutes
	Ethyl vinyl alcohol laminate ("EVAL")	> 0.35 mm	> 120 minutes
	Wear protective Neoprene™ gloves	> 0.35 mm	> 120 minutes
	Wear protective nitrile rubber gloves	> 0.35 mm	> 120 minutes

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection Use appropriate respiratory protection.
Organic gases and vapours filter conforming to EN 14387. Type A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Colourless
Odour	Ether.
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	-85 °C	Read-across.
Initial boiling point and boiling range	171 °C	@ 1013 hPa. Read-across.
Flammability		Not applicable.
Flammability Limit in Air		Read-across.
Upper flammability or explosive limits	8.4% vol	
Lower flammability or explosive limits	1.1% vol	
Flash point	62.5 °C	@ 721.0343 hPa. Closed cup. ASTM D3278.
Autoignition temperature	260 °C	Read-across.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity	3.85 mm²/s	@ 20 °C. Read-across.
Dynamic viscosity	2.8 mPa s	@ 25 °C. Read-across.
Water solubility	52 g/l	@ 20 °C. Read-across.
Solubility(ies)		No information available.
Partition coefficient	log Pow: 1.2	
Vapour pressure	1.05 mm Hg	@ 25 °C. Read-across.
Relative density	0.878	@ 25 °C / 25 °C. ASTM D891.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density	4.6	Read-across.
Particle characteristics		Not applicable. liquid.
Particle Size	No information available	
Particle Size Distribution	No information available	

Explosive properties Not considered to be explosive.
Oxidising properties Does not meet the criteria for classification as oxidising

9.2. Other information

Molecular weight 132.2 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under recommended storage conditions.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Do not distill to dryness. Product can oxidise at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Aldehydes. Ketone. Organic Acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact Causes serious eye irritation.

Skin contact Causes skin irritation.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
3-BUTOXYPROPAN-2-OL	= 3300 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes skin irritation.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404	Rabbit	Dermal			Causes skin irritation

Serious eye damage/eye irritation Causes serious eye irritation.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes serious eye irritation

Respiratory or skin sensitisation Non-sensitizing.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Exposure route	Results
OECD 406	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity Did not show mutagenic effects in animal experiments.

Component Information
3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Results
	in vitro	Negative

Carcinogenicity Did not cause cancer in laboratory animals.

Component Information
3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Results
		Did not cause cancer in laboratory animals.

Reproductive toxicity For similar material(s): In animal studies, did not interfere with reproduction.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Results
		For similar material(s): In animal studies, did not interfere with reproduction

STOT - single exposure Based on available data, specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Based on available data, specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

STOT - repeated exposure Based on available data, a STOT-RE classification is not warranted.

Component Information
3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Based on available data, a STOT-RE classification is not warranted.

Aspiration hazard Based on available data the classification criteria are not met.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test or Equivalent.	Poecilia reticulata	LC50	560 - 1000 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test or Equivalent.	Daphnia magna	EC50	> 1000 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Pseudokirchneriella subcapitata	EC50	> 1000 mg/L	96 hours	

OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Pseudokirchneriella subcapitata	NOEC	560 mg/L	96 hours	
Bacteria toxicity		EC50	> 1000 mg/L	3 hours	

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.

3-BUTOXYPROPAN-2-OL (5131-66-8)

Method	Exposure time	Value	Results
OECD Test No. 301E: Ready Biodegradability: Modified OECD Screening Test (TG 301 E) or Equivalent.	28 days	90 % Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Bioconcentration factor (BCF) <100

Component Information

Chemical name	Partition coefficient
3-BUTOXYPROPAN-2-OL	1.2

12.4. Mobility in soil

Mobility in soil Miscible in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
3-BUTOXYPROPAN-2-OL	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Contaminated packaging Empty remaining contents. Do not reuse empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not regulated
14.2
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None

14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:
This product contains one or more substances subject to restriction (UK REACH - Annex XVII).
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Persistent Organic Pollutants
Not applicable

Export Notification requirements
Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)
Not applicable

The Ozone-Depleting Substances Regulations 2015
Not applicable

The Biocidal Products Regulations 2001 (as amended)
Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)
Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)
Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Legend
SVHC: Substances of Very High Concern for Authorisation:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note SDS sections updated 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Lisa Bland

Supercedes date 27-Jul-2022

Revision date 27-Jul-2022

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Exposure scenario
Manufacture of substance

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Manufacture of substance
Process scope	Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).
Main sector	SU3 Industrial uses
Environment	
Environmental release category	ERC1 Manufacture of the substance
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 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 PROC15 Use as laboratory reagent.

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

Product characteristics

Manufacture of substance

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 12400 kg

Frequency and duration of use

Emission days: 300 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes activities are at ambient temperature (unless stated differently).

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

Technical protective measures Clear transfer lines prior to de-coupling. No other specific measures identified.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.

Manufacture of substance

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated. 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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. 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 and (re)packing of substances and mixtures

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Formulation and (re)packing of substances and mixtures
Process scope	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
Main sector	SU3 Industrial uses
Environment	
Environmental release category	ERC2 Formulation into mixture
SPERC	ESVOC SPERC 2.2.v1
Worker	

Formulation and (re)packing of substances and mixtures

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 Tabletting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Daily amount per site: 2100 kg
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 16504 kg/day

Frequency and duration of use

Emission days: 300 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store finished products in closed containers (e.g. bulk tanks, drums, cans).
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Use vapour recovery units when necessary.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

Formulation and (re)packing of substances and mixtures

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

Product characteristics

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

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes activities are at ambient temperature (unless stated differently).

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

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.
Avoid direct eye contact with product, also via contamination on hands.
Use suitable eye protection.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Industrial use in coatings

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Industrial use in coatings
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.
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)
Worker	

Industrial use in coatings

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 PROC13 Treatment of articles by dipping and pouring. PROC14 Tabletting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 555 kg

Frequency and duration of use

Emission days: 300 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

Industrial use in coatings

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Ventilation rate PROC7 Industrial spraying Manual spraying Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

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

Technical protective measures PROC7 Industrial spraying Spraying (automatic/robotic) Carry out in a vented booth or extracted enclosure. No other specific measures identified.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

PROC7 Industrial spraying
Manual spraying
Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Professional use in coatings

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Professional use in coatings
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods and film formation) and equipment cleaning, maintenance and associated laboratory activities.
Main sector	SU22 Professional uses
Environment	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Worker	

Professional use in coatings

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

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 1973 kg

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

Professional use in coatings

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Ventilation rate PROC19 Manual activities involving hand contact Indoor. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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

Technical protective measures PROC11 Non industrial spraying Manual spraying Indoor. Carry out in a vented booth or extracted enclosure.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC19 Manual activities involving hand contact
Wear suitable gloves tested to EN374.
PROC11 Non industrial spraying
Manual spraying
Outdoor.
Wear a respirator conforming to EN140 with Type A/P2 filter or better.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Professional use in coatings

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Industrial use in cleaning agents

Identification

Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use in cleaning agents
Process scope	Covers the use as a component of cleaning products, including transfer from storage, pouring/unloading from drums or containers and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.
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)
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 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 PROC13 Treatment of articles by dipping and pouring.

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

Industrial use in cleaning agents

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 3821 kg

Frequency and duration of use

Emission days: 20 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 25 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes activities are at ambient temperature (unless stated differently).

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

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Industrial use in cleaning agents

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. PROC7 Industrial spraying Cleaning with high-pressure washers Avoid carrying out activities involving exposure for more than 4 hours.
Risk management measures	
	PROC7 Industrial spraying Cleaning with high-pressure washers Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated.
	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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Professional use in cleaning agents

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Professional use in cleaning agents
Process scope	Covers the use as a component of cleaning products, including pouring/unloading from drums or containers and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand).
Main sector	SU22 Professional uses
Environment	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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 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.

Professional use in cleaning agents

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 3821 kg

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 25 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes activities are at ambient temperature (unless stated differently).
Ventilation rate	PROC11 Non industrial spraying Cleaning with high-pressure washers Indoor. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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

Professional use in cleaning agents

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

PROC11 Non industrial spraying
Cleaning with high-pressure washers
Indoor.
Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.
PROC11 Non industrial spraying
Cleaning with high-pressure washers
Outdoor.
Wear suitable gloves tested to EN374.
Wear a respirator conforming to EN140 with Type A/P2 filter or better.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Professional use in agrochemicals

Identification

Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional use in agrochemicals
Process scope	Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging, including equipment clean-downs and disposal.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

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 PROC4 Chemical production where opportunity for exposure arises 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 PROC13 Treatment of articles by dipping and pouring.

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

Product characteristics

Physical state	Liquid

Professional use in agrochemicals

Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 62 kg

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 25 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes activities are at ambient temperature (unless stated differently).

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

Technical protective measures PROC11 Non industrial spraying Spraying/fogging by machine application Carry out in a vented booth or extracted enclosure.

Organisational measures to prevent/limit releases, dispersion and exposure

Professional use in agrochemicals

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. PROC11 Non industrial spraying Spraying/fogging by manual application Outdoor. Avoid carrying out activities involving exposure for more than 4 hours.
Risk management measures	
	PROC11 Non industrial spraying Spraying/fogging by manual application Outdoor. Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated.
	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.

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

	Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Industrial use in metal working fluids / rolling oils

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Industrial use in metal working fluids / rolling oils
Process scope	Covers the use in formulated MWFs/rolling oils, including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.
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)
Worker	

Industrial use in metal working fluids / rolling oils

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 PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 62 kg

Frequency and duration of use

Emission days: 20 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

Industrial use in metal working fluids / rolling oils

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 25 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes activities are at ambient temperature (unless stated differently).

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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

Technical protective measures PROC7 Industrial spraying Spraying/fogging by machine application Carry out in a vented booth or extracted enclosure.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Professional use in metal working fluids / rolling oils

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Professional use in metal working fluids / rolling oils
Process scope	Covers the use in formulated MWFs, including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles and disposal of waste oils.
Main sector	SU22 Professional uses
Environment	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Worker	

Professional use in metal working fluids / rolling oils

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. PROC17 Lubrication at high energy conditions in metal working operations

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Maximum daily site tonnage: 62 kg

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

Good practice	Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.
Technical measures	Store substance within a closed system.
STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4% Assumed onsite sewage treatment plant flow: 2000 m³/day

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

Air	Wet scrubber for elimination of volatile components from waste gases. Vapour recovery system.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste product or used containers according to local regulations
Disposal method	Incineration, disposal or recycling at specific offsite provider.

Professional use in metal working fluids / rolling oils

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 25 %.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature	Assumes activities are at ambient temperature (unless stated differently).

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

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. PROC11 Non industrial spraying Avoid carrying out activities involving exposure for more than 4 hours.

Risk management measures

PROC11 Non industrial spraying
Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Consumer use in coatings

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Consumer use in coatings
Process scope	Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.
Product category	PC9a Coatings and paints, thinners, paint removers.
Main sector	SU21 Consumer uses
Environment	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

2. Conditions of use affecting exposure (Non-industrial - Environment 1)	
Product characteristics	
Physical state	Liquid
Concentration details	Covers concentrations up to 10 %.
Amounts used	
	Maximum daily site tonnage: 285 kg
Frequency and duration of use	
	Emission days: 365 days/year
Environmental factors not influenced by risk management measures	

Consumer use in coatings

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste product or used containers according to local regulations

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 10 %.

Amounts used

Amount per use: 1250 g

Frequency and duration of use

Covers daily exposure up to 1hour
Covers frequency up to 5 days/year, , .

Other given operational conditions affecting Non-industrial exposure

Setting	Indoor.
Room size	Covers use in room size of 20 m³.
Ventilation rate	Open windows during application to ensure natural ventilation.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated. 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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated. Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Consumer use in coatings

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Consumer use in cleaning products

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Consumer use in cleaning products
Process scope	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.
Product category	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) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

2. Conditions of use affecting exposure (Non-industrial - Environment 1)	
Product characteristics	
Physical state	Liquid
Concentration details	Covers concentrations up to 5 %.
Amounts used	
	Maximum daily site tonnage: 285 kg
Frequency and duration of use	
	Emission days: 365 days/year
Environmental factors not influenced by risk management measures	

Consumer use in cleaning products

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste product or used containers according to local regulations

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

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 5 %.

Amounts used

Amount per use: 16 g

Frequency and duration of use

Covers daily exposure up to 1hour
Covers frequency up to 365 days/year, , .

Other given operational conditions affecting Non-industrial exposure

Setting	Indoor.
Room size	Covers use in room size of 15 m³.
Ventilation rate	Covers use under typical household ventilation.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated. 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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method	The Consexpo model has been used to estimate consumer exposures, unless otherwise indicated. Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Consumer use in cleaning products

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario
Consumer use of cosmetics

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Consumer use of cosmetics
Process scope	Consumer uses e.g. as a carrier in cosmetics/personal care products, perfumes and fragrances. Note: for cosmetic and personal care products, risk assessment only required for the environment under REACH as human health is covered by alternative legislation.
Product category	PC39 Cosmetics, personal care.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

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

Product characteristics

Physical state	Liquid

Amounts used

Maximum daily site tonnage: 123 kg

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Consumer use of cosmetics

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Risk management measures

STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4% Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste product or used containers according to local regulations

3. Exposure estimation (Environment 1)

Assessment method	Used ECETOC TRA model. Unless otherwise stated. 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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

In accordance to the Article 14 (5b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation for human health does not need to be performed for end uses in cosmetic products within the scope of Directive 76/768/EEC.

Exposure scenario
Consumer use in agrochemicals

Identification	
Product name	3-Butoxypropan-2-ol
REACH registration number	01-2119475527-28-XXXX
CAS number	5131-66-8
EC number	225-878-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario	
Main title	Consumer use in agrochemicals
Process scope	Covers the consumer use in agrochemicals in liquid and solid forms.
Product category	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) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

2. Conditions of use affecting exposure (Non-industrial - Environment 1)	
Product characteristics	
Physical state	Liquid
Concentration details	Covers concentrations up to 10 %.
Amounts used	
	Maximum daily site tonnage: 62 kg
Frequency and duration of use	
	Emission days: 365 days/year
Environmental factors not influenced by risk management measures	
Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100

Consumer use in agrochemicals

Risk management measures

STP type Municipal STP.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87.4%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Disposal method Dispose of waste product or used containers according to local regulations

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 5 %.

Amounts used

Amount per use: 137 g

Frequency and duration of use

Covers daily exposure up to 6minutes
Covers frequency up to 365 days/year, , .

Other given operational conditions affecting Non-industrial exposure

Setting Indoor.

Room size Covers use in room size of 20 m³.

Ventilation rate Covers use under typical household ventilation.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method Used ECETOC TRA model. Unless otherwise stated.

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.

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

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

Consumer use in agrochemicals

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.