SAFETY DATA SHEET
SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

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

1.1. Product identifier

Product name SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

Product number 10479

Synonyms; trade names CRYSTAL 0100, CRYSTAL 0501, CRYSTAL 0112, CRYSTAL 0140, CRYSTAL 0120, CRYSTAL 0503, CRYSTAL A140, SILICATE SODIUM A45, SILICATE SODIUM D40, SILICATE SODIUM R200 47, SODIUM SILICATE ALKALINE, SOD SILICATE SOL 0503 XTL, SODIUM SILICATE NEUTRAL, SODIUM SILICATE 50-52, CORROSIL B-0, CORROSIL B-10, CRYSTAL 0125, CRYSTAL 0508, SOD SILICATE SOL 0100 XTL, SOD SILICATE SOL 0501 XTL, SOD SILICATE SOL ALKALINE 45

REACH registration number 01-2119448725-31-XXXX

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

Identified uses Chemical Intermediate Detergent. Cleaning agent. Adhesive. Binder Surface coating Paper production ADDITIVE Thickener Water treatment. Flame retardant For further information, see attached Exposure Scenario.

1.3. Details of the supplier of the safety data sheet

Supplier

Univar
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
+44 1274 267306
sds@univar.com

1.4. Emergency telephone number

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

Sds No. 10479

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318

Environmental hazards Not Classified

2.2. Label elements

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

Hazard pictograms

Signal word	Danger
Hazard statements	H315 Causes skin irritation. H318 Causes serious eye damage.
Precautionary statements	P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Contains	SODIUM SILICATE(1.6<MR<=2.6)

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria. In case of spills, beware of slippery floors and surfaces.

SECTION 3: Composition/information on ingredients

3.1. Substances

SODIUM SILICATE(1.6<MR<=2.6) **>20%**

CAS number: 1344-09-8 EC number: 215-687-4 REACH registration number: 01-2119448725-31-XXXX

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
STOT SE 3 - H335

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

Product name	SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)
REACH registration number	01-2119448725-31-XXXX
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Do not induce vomiting. Give plenty of water to drink. Never give liquid to an unconscious person. Get medical attention if any discomfort continues.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention if any discomfort continues.

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

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

Notes for the doctor Treat symptomatically.

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 The product is non-combustible. 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.

5.3. Advice for firefighters

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 Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Take care as floors and other surfaces may become slippery.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Small Spillages: Neutralise with acid. Large Spillages: Absorb spillage with inert, damp, non-combustible 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. Flush contaminated area with plenty of water. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see Section 13.

SECTION 7: Handling and storage

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Eye wash facilities and emergency shower must be available when handling this product. Avoid spilling. Eye wash facilities and emergency shower must be available when handling this product. Keep unnecessary and unprotected personnel away from the spillage.

Advice on general occupational hygiene When using do not eat, drink or smoke.

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. Container must be kept tightly closed when not in use. Unsuitable containers: copper, zinc, aluminium, copper alloy, zinc alloy, aluminium alloy. Avoid freezing. Store at temperatures above -5°C. Store at temperatures not exceeding 50°C. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Store away from the following materials: Acids.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

SODIUM SILICATE(1.6<MR<=2.6)

Short-term exposure limit (15-minute): 2 mg/m³

Ingredient comments Observe any occupational exposure limits for the product or ingredients.

SODIUM SILICATE(1.6<MR<=2.6) (CAS: 1344-09-8)

DNEL

Industry - Inhalation; Long term systemic effects: 5.61 mg/m³
Industry - Dermal; Long term systemic effects: 1.59 mg/kg/day
Consumer - Oral; Long term systemic effects: 0.80 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 1.38 mg/m³
Consumer - Dermal; Long term systemic effects: 0.80 mg/kg/day

PNEC

- Fresh water; 7.5 mg/l
- marine water; 1 mg/l
- Intermittent release; 7.5 mg/l
- STP; 348 mg/l

8.2. Exposure controls

Protective equipment

Appropriate engineering controls Provide adequate ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

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. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	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. The selected gloves should have a breakthrough time of at least 8 hours. Butyl rubber. Neoprene. Polyvinyl chloride (PVC). Rubber (natural, latex). Thickness: 0.6 mm 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 skin 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. Gas filter, type B. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Colourless. to Light (or pale). Grey.
Odour	Odourless.
Odour threshold	No information available.
pH	pH (concentrated solution): >8 pH (diluted solution): 11.5 (1%)
Melting point	0 - -12°C
Initial boiling point and range	>100°C
Flash point	> 400°C
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
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	1.30 - 1.60
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable.

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	10 - 10000 mPas
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Other information	Not determined.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
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	Exothermic reaction with acids

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	The following materials may react with the product: Aluminium. Zinc. Tin. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air.

10.4. Conditions to avoid

Conditions to avoid	Avoid freezing. Keep at temperature not exceeding 50°C. Avoid contact with acids.

10.5. Incompatible materials

Materials to avoid	Alkaline earth metals. Lead. Zinc. Aluminium. Tin. Strong acids. Copper. 2. Ammonium compounds Cyanides. Magnesium. Organic nitro compounds. Strong oxidising agents.

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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation.

Serious eye damage/irritation

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility Fertility - NOAEL >159 mg/kg/day, , Rat

Reproductive toxicity - development Developmental toxicity: - NOAEL: >200 mg/kg/day, , Mouse

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL >159 mg/kg/day, Oral, Rat

Aspiration hazard

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

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May cause stomach pain or vomiting.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

Toxicological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,400.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,000.0
Species	Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	2.06
Species	Rat

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

ATE inhalation (dusts/mists mg/l)	2.06

Inhalation	Dust may irritate the respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	Powder may irritate skin.
Eye contact	May cause severe eye irritation. Risk of serious damage to eyes.

SECTION 12: Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Ecological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

Ecotoxicity	The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 1108 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 1700 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: >207 mg/l, Scenedesmus subspicatus

Ecological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 1108 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 1700 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product contains inorganic substances which are not biodegradable.

Ecological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

Persistence and degradability	The product contains only inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient Not applicable.

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

Ecological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

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.

SODIUM SILICATE(1.6<MR<=2.6)

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

Ecological information on ingredients.

SODIUM SILICATE(1.6<MR<=2.6)

Other adverse effects No information available.

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

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

US - TSCA
All the ingredients are listed or exempt.

Australia - AICS
All the ingredients are listed or exempt.

SECTION 16: Other information

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

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.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: 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.
EC_{50}: 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

29/07/2019

Version number

5.000

Supersedes date

13/03/2019

SDS number

10479

SODIUM SILICATE SOLUTION (1.6 < 2.6 MR)

SDS status	Approved.
Hazard statements in full	H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Signature	Lisa Bland

Exposure scenario
Workplace exposure to sodium silicate powder

Identification

Product name	Sodium Silicate
REACH registration number	01-2119448725-31-XXXX
CAS number	1344-09-8
EC number	215-687-4
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Workplace exposure to sodium silicate powder
Main sector	SU3 Industrial uses SU22 Professional uses

Worker

Workplace exposure to sodium silicate powder

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
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
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring.
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
PROC22 Manufacturing and processing of minerals and/or metals at substantially elevated temperature
PROC23 Open processing and transfer operations at substantially elevated temperature
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles

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

Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

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

Product characteristics

Physical state Solid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

Assumes a good basic standard of occupational hygiene is implemented.

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

Workplace exposure to sodium silicate powder

Technical protective measures Consider technical advances and process upgrades (including automation) for the elimination of releases. minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment. Clean/flush equipment, where possible, prior to maintenance Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenario; clear up spills immediately and dispose of waste safely. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance. PROC7 Industrial spraying PROC11 Non industrial spraying Provide extract ventilation to points where emissions occur.

Risk management measures

Wear suitable gloves (tested to EN374) and eye protection.

PROC7 Industrial spraying
PROC11 Non industrial spraying
Wear a respirator conforming to EN140 with Type A/P2 filter or better.

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

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

Exposure scenario
Workplace exposure to sodium silicate solutions

Identification

Product name	Sodium Silicate
REACH registration number	01-2119448725-31-XXXX
CAS number	1344-09-8
EC number	215-687-4
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Workplace exposure to sodium silicate solutions
Main sector	SU3 Industrial uses SU22 Professional uses

Worker

Workplace exposure to sodium silicate solutions

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
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
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring.
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
PROC22 Manufacturing and processing of minerals and/or metals at substantially elevated temperature
PROC23 Open processing and transfer operations at substantially elevated temperature
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles

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

Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

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

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

Assumes a good basic standard of occupational hygiene is implemented.

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

Workplace exposure to sodium silicate solutions

Technical protective measures Consider technical advances and process upgrades (including automation) for the elimination of releases. minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment. Clean/flush equipment, where possible, prior to maintenance Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenario; clear up spills immediately and dispose of waste safely. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance. PROC7 Industrial spraying PROC11 Non industrial spraying Provide extract ventilation to points where emissions occur.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures PROC7 Industrial spraying PROC11 Non industrial spraying Avoid carrying out operation for more than 1 hour.

Risk management measures

Wear suitable gloves (tested to EN374) and eye protection.

PROC7 Industrial spraying
PROC11 Non industrial spraying
Wear a respirator conforming to EN140 with Type A/P2 filter or better.

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

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

Exposure scenario
Use in Consumer products

Identification

Product name	Sodium Silicate
REACH registration number	01-2119448725-31-XXXX
CAS number	1344-09-8
EC number	215-687-4
Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 sds@univar.com

1. Title of exposure scenario

Main title	Use in Consumer products
Product category	PC1 Adhesives, sealants. PC3 Air care products. PC8 Biocidal products PC9a Coatings and paints, thinners, paint removers. PC9b Fillers, putties, plasters, modelling clay. PC9c Finger paints. PC15 Non-metal-surface treatment products. PC16 Heat transfer fluids. PC17 Hydraulic fluids. PC31 Polishes and wax blends. PC34 Textile dyes and impregnating products PC35 Washing and cleaning products PC39 Cosmetics, personal care.
Main sector	SU21 Consumer uses

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

Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

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

Product characteristics

Physical state	Powder products , or: Liquid products
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.

Use in Consumer products

Amounts used

For each use event, covers use amounts up to 37500 g.
Unless otherwise stated.

Frequency and duration of use

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

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 6660 cm². Unless otherwise stated.

Other given operational conditions affecting Non-industrial exposure

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

Room size 20 m³

Ventilation rate Covers use under typical household ventilation.

Other given operational conditions affecting Non-industrial exposure

Consumer information Read label before use. Avoid using without gloves.

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

3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

3. Exposure estimation (Health 1)

Qualitative approach used to conclude safe use.