

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

Supersedes date 16-Jun-2021

Revision date 14-Dec-2023

Revision Number 4

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

1.1. Product identifier

Product Code(s) 11473

Safety data sheet number 11473

Product Name SODIUM SILICATE SOLUTIONS (MR>3.2)

Synonyms CRYSTAL 0079, CRYSTAL 0084, CRYSTAL 0070, CRYSTAL 0075, SODIUM SILICATE 37/40 PE, SOD SILICATE 37-40, SODIUM SILICATE SOLUTION CA. 3.4, SODIUM SILICATE SOLUTION CA. 3.4 - S38, CRYSTAL 0506, SODIUM SILICATE 340-3738, SOD SILICATE 40-42 BE, SODIUM SILICATE SOL 0084 XTL, NATRONWATERGLAS 38/40 °BE, SODIUM SILICATE 0070 XTAL, SODIUM SILICATE 38/40, SOD SILICATE SOL 0075 XTL, SODIUM SILICATE 0079, SOD SILICATE SOL SUPER NEUTRAL, SOD SILICATE 330 3941, SODIUM SILICATE 3941, SODIUM SILICATE 38-40 16N34 SOLUTION, SOD SILICATE 38-40 16N34 SOL

Pure substance/mixture Mixture

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

Recommended use Chemical intermediate Detergent Process Additive Bleaching Agent Binder Corrosion inhibitor Flame retardant Flotation agent Stabilizer Concentrate Cleaning agent ADHESIVES Surface coating Industrial use Consumer use Professional use

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

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified

Precautionary statements

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

The product contains no substances which at their given concentration, are considered to be hazardous to health

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)
SODIUM SILICATE (MR>3.2) 1344-09-8	20 - 40%	215-687-4	-	-	-	-	-

Full text of H- and EUH-phrases: see section 16This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)**SECTION 4: First aid measures****4.1. Description of first aid measures****General advice**

Get medical advice/attention if you feel unwell.

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.
Ingestion	Rinse mouth thoroughly with water. Do NOT induce vomiting. Get medical attention if symptoms occur.

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

Eyes	May cause temporary eye irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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.
Hazardous combustion products	Carbon oxides. Silicon oxides.

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.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Provide adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. No naked flames.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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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. Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

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. Keep away from heat, sparks and open flame. Handle in accordance with good industrial hygiene and safety practice. Keep container closed when not in use.

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 heat. Do not store together with. Strong acids. Metals.

Packaging materials Suitable container/equipment material. stainless steel.
Unsuitable container/equipment material. copper. Zinc. Aluminium. Tin.

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

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

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
SODIUM SILICATE (MR>3.2) 1344-09-8		1.59 mg/kg bw/day [4] [6]	5.61 mg/m ³ [4] [6]

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

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
SODIUM SILICATE (MR>3.2) 1344-09-8	0.8 mg/kg bw/day [4] [6]	0.8 mg/kg bw/day [4] [6]	1.38 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
SODIUM SILICATE (MR>3.2) 1344-09-8	7.5 mg/L	7.5 mg/L	1 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
SODIUM SILICATE (MR>3.2) 1344-09-8			348 mg/L		

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
	Polyvinyl chloride (PVC)		
	Wear protective nitrile rubber gloves		
	Rubber (natural, latex)	0.6 mm	> 8 hours
	Wear protective butyl rubber gloves	0.6 mm	> 8 hours
	Wear protective Neoprene™ gloves	0.6 mm	> 8 hours

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Viscous liquid
Colour	Colourless To Light (or pale) Grey
Odour	Odourless.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	-12 - 0 °C	
Initial boiling point and boiling range	100 - 105 °C	
Flammability		The product is not flammable.
Flammability Limit in Air		Not applicable.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point		Not applicable.
Autoignition temperature		Not applicable.
Decomposition temperature		No information available.
pH		
pH (as aqueous solution)	10.5 - 13.0	solution (1.0 %).
Kinematic viscosity		No information available.
Dynamic viscosity	10 - 30000 mPa s	
Water solubility	Completely soluble in water	
Solubility(ies)		No information available.
Partition coefficient		Not applicable.
Vapour pressure	<1 kPa	
Relative density	1.30 - 1.60	
Bulk density		No information available
Liquid Density	1300 kg/m ³ - 1600 kg/m ³	No information available
Relative vapour density		No information available.
Particle characteristics		Not applicable.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reactivity	No known effects under normal use conditions.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Contact with metals (aluminium, zinc, tin) may release hydrogen gas. Exothermic reaction with acids.
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10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Some hydrogen gas may be released. Hydrogen is flammable and can form explosive mixtures with air.

10.5. Incompatible materials

Incompatible materials Alkaline earth metals. Zinc. Aluminium. Lead. Ammonia. Magnesium. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Silicon oxides.

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 May cause temporary eye irritation.

Skin contact Prolonged contact may cause redness and irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
SODIUM SILICATE (MR>3.2)	= 3400 mg/kg (Rat)	> 5000 mg/kg bw (Rat)	> 2.06 mg/l (Rat) (4h)

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

Skin corrosion/irritation Based on available data the classification criteria are not met.

SODIUM SILICATE (MR>3.2) (1344-09-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal		24; 48; 72 hours	non-irritant

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

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

SODIUM SILICATE (MR>3.2) (1344-09-8)

Method	Species	Exposure route	Results
OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay	Mouse	Dermal	Not a skin sensitiser

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Component Information

SODIUM SILICATE (MR>3.2) (1344-09-8)

Method	Species	Results
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro Hamster	Negative
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro Hamster	Negative
OECD Test No. 475: Mammalian Bone Marrow Chromosome Aberration Test	in vivo Mouse	Negative

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

SODIUM SILICATE (MR>3.2) (1344-09-8)

Method	Species	Results
NOAEL	Rat	Not Classifiable

STOT - single exposure

Based on available data the classification criteria are not met.

STOT - repeated exposure

Based on available data the classification criteria are not met.

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**

The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Fish Brachydanio rerio	LC50	1108 mg/L	96 hours	
EU Method C.2	Daphnia magna	EC50	1700 mg/L	48 hours	
	Algae Desmodesmus subspicatus	EC0	207 mg/L	72 hours	
	Algae Desmodesmus	ErC50	> 345.4 mg/L	72 hours	

	subspicatus				
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12.2. Persistence and degradability

Persistence and degradability Not readily biodegradable. Inorganic.

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

12.4. Mobility in soil

Mobility in soil Soluble 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
SODIUM SILICATE (MR>3.2)	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 Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

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 does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product does not contain substances subject to restriction (UK REACH - Annex XVII).

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/NDL	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
KECL	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
AIC - 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****Legend**

SVHC: Substances of Very High Concern for Authorisation:

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)
 EPA (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)
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

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**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