SAFETY DATA SHEET- SODIUM SILICATE 75's

According to regulation (EC) No 2020/878

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

1.1 Product Identifier

Sodium Silicate 75's

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

Use of the substance/mixture

Primarily used for the production of Casting Slips.

1.3 Details of the supplier of the safety data sheet

Valentine Clays LTD

Valentine Way

Stoke on Trent

ST4 2FJ

t: +44 (0)1782 271200

e: sales@valentineclays.co.uk

w: www.valentineclays.co.uk

1.4 Emergency Telephone Number

+44 (0)1782 271200

Section 2: Hazards Identification

Hazard Summary- Alkaline Solution

2.1 Classification of the substance or mixture

CLP- Skin Irritation. 2, Eye Damage. 1.

CHIP

2.2 Label Elements

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/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.

2.3 Other Hazards

No information available.

Section 3: Composition/information on ingredients

3.1 Substances

Substance	CAS Number	EC Number	% w/w
Sodium Silicate	1344-09-8	215-687-4	20-60
Water	-	231-791-2	40-80

Section 4: First Aid Measures

4.1 Description of first aid measures

After Inhalation- After inhalation of spray mist: bring to fresh air, seek medical advice if necessary.

After Ingestion- Rinse mouth and throat. Drink 1-2 glasses of water. P313 - Get medical advice/attention.

After Eye Contact- Immediately flush eyes with eyewash solution or water (for 10 minutes). Seek an oculist if necessary.

After Skin Contact- Rinse with running water and soap. Apply replenishing cream. Remove contaminated clothing.

4.2 Most important symptoms and effects, both acute and delayed

Causes Skin Irritation

Causes Serious Eye Damage

4.3 Indication of any immediate medical attention and special treatment needed

Speed in removal of material is of prime importance

Remove soiled clothing immediately

Section 5: Firefighting Measures

5.1 Extinguishing Media

Not applicable

Inorganic Material

Treat fire according to surrounding area

5.2 Special Hazards arising from the Substance or Mixture

Inorganic Material

Not applicable

5.3 Advice for Fire Fighters

No special precautions required

Section 6: Accidental Release Measures

6.1 Personal Precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes

Danger of slipping on spilled product

6.2 Environmental Precautions

Do not allow to enter sewers/surface or ground water

Prevent the spread of the product into the environment by diking with sand or other absorbent material.

Contact the authorities in the event of a large product spillage to water courses or sewage systems or if spillage has contaminated soil.

6.3 Methods and material for containment and cleaning up

Remove with liquid-absorbing material for example sand

Remove last traces by diluting with plenty of (warm) water

6.4 Reference to other sections

See Section 8

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing

Wear protective clothing as per section 8

Eye wash facilities should be readily available

7.2 Conditions for safe storage, including any incompatibilities

Keep away from acid

Keep from freezing

Keep packing/storage vessel closed

Compatible Materials- (Stainless) steel

Incompatible Materials- Zinc, Tin, Aluminium, Copper and their alloys

See Section 10

7.3 Specific end use(s)

See section 1.2

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Section 8: Exposure Controls/ Personal Protection

8.1 Control Parameters

No particular measures required

8.2 Exposure Controls


Engineering methods to prevent or control exposure are preferred

Wear protective clothing to minimise skin contact

Wear eye/face protection

Wear suitable alkaline resistant gloves

P261- Avoid breathing dust/fume/gas/mist/vapours/spray

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance- Viscous liquid colourless to translucent

Odour- Odourless

pH- (value) 1% solutions ranges from 11 to 13

Melting Point/Range- 0 to -12 °C

Boiling Point/Range- 100 °C

Density- 1.30- 1.60 kg/l

Solubility in Water- Soluble

Viscosity- Viscosity 10 to 10,000 mPas at 20 deg C

9.2 Other Information

No information available

Section 10: Stability and Reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of Hazardous Reactions

Aqueous solutions will react with aluminium, zinc, tin, copper and their alloys evolving hydrogen gas which can form an explosive mixture with air.

Exothermic reaction if in contact with acids

SAFETY DATA SHEET- SODIUM SILICATE 75's

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10.4 Conditions to Avoid

Avoid contact in concentrated form with acids

10.5 Incompatible Materials

Avoid contact with aluminium, zinc, tin, copper and their alloys

10.6 Hazardous Decomposition Products

No information available

Section 11: Toxicological Properties

11.1 Information on toxicological effects

LD50 (oral, rat) 3.4 mg/kg

LC50 (inhalation, rat); > 2.06 mg/m³ (4h- OECD 403)

LD50 (dermal rat) > 5000 mg/kg

Eye contact: Causes serious eye damage, unless treated immediately

Skin contact Causes skin irritation

Carcinogenicity No structural alerts

Mutagenicity No evidence of genotoxicity. In vitro/in vivo negative

Sensitization: Not sensitising

Reproductive toxicity Effects on fertility: NOAEL (rat) > 159 mg/kg/bw/d. Developmental toxicity: NOAEL (mouse) > 200 mg/kg/bw/d

Section 12: Ecological Information

12.1 Toxicity

LC50 (Brachydanio rerio) 1108 mg/l (96 hr)

EC50 (Daphnia magna) 1700 mg/l (48 hr)

EC50 (scenedesmus subspicatus) biomass 207 mg/l (72 hr)

EC50 (scenedesmus subspicatus) growth rate > 345.4 mg/l (72 hr)

12.2 Persistence and Degradability

Soluble silicates upon dilution rapidly depolymerise into molecular species indistinguishable from natural dissolved silica. They combine with ions like Ca, Mg, Fe, Al and others to end up as insoluble compounds similar to constituents of natural soils.

12.3 Bio accumulation Potential

The product is not bio accumulating

12.4 Mobility in Soil

No further relevant information available

12.5 Results of PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria

12.6 Other adverse effects

The alkalinity of this material will have local effect on ecosystems sensitive to changes in pH.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods

Dispose of the product, packaging and any residuals in compliance with local and national regulations.

Section 14: Transport Information

14.1 UN Number

UN No.: None

14.2 UN Proper Shipping Name

Proper Shipping Name: None

14.3 Transport hazard class(es)

Hazard Class: None

14.4 Packing group

Packing Group: None

14.5 Environmental hazards

No information available

14.6 Special precautions for user

See Section 7.2

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

Not applicable

Section 15: Regulatory Information

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

15.2 Chemical Safety Assessment

Section 16: Other Information

This data sheet is provided under CLP and REACH Regulation and is not intended to constitute an assessment of workplace risk associated with product(s) used as required under any other Health and Safety Regulation.

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

Date of Review: March 2025

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