

SAFETY DATA SHEET

SODIUM ORTHOSILICATE

SECTION 1 CHEMICAL PRODUCT:

Product Synonyms: TETRASODIUM ORTHOSILICATE; SILICIC ACID, TETRA SODIUM SALT; TETRASODIUM SILICATE; SILICIC ACID (H₄SiO₄), SODIUM SALT (1:4)

Substance name SODIUM ORTHOSILICATE,

Formula Na₄O₄Si

Chemical family Inorganic Family

SECTION 2. HAZARDS IDENTIFICATION:

Label Elements



Signal Word **Danger**

Hazard Statements

H 302-Harmful if swallowed
H 314-Causes severe skin burns and eye damage
H 335 - May cause respiratory irritation
H 318-Causes serious eye damage

Precautionary Statements

Prevention

P 264 - Wash hands and face thoroughly after handling
P 270-Do not eat, drink or smoke when using this product
P 260 - Do not breathe dust/fume/gas/mist/vapors/spray
P 280-Wear protective gloves/protective clothing/eye protection/face protection
P 261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P 271-Use only outdoors or in a well-ventilated area

Response

P 301+P 312-IF SWALLOWED: Call a poison center or doctor if you feel unwell
P 330 - Rinse mouth

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P301+P330+P331-IF SWALLOWED:rinse mouth.Do NOT induce vomiting
P303+P361+P353-IF ON SKIN (or hair):Take off immediately all contaminated clothing.Rinse skin with water or shower P363 - Wash contaminated clothing before reuse
P304+P340-IF INHALED:Remove person to fresh air and keep comfortable for breathing P310 - Immediately call a POISON CENTER or doctor
P321-Specific treatment (see supplemental first aid instructions on this label)
P305+P351+P338-IF IN EYES:Rinse cautiously with water for several minutes. Remove contact lenses ,if present and easy to do. Continue rinsing
P312-Call a POISON CENTER or doctor if you feel unwell
Storage
P405-Store locked up
P403+P233-Store in a well-ventilated place. Keep container tightly closed
Disposal
P501-Dispose of contents/container to an approved waste disposal plant

Other Hazards

NFPA

Health
4

Flammability
1

Instability
0

Physical hazards
-

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1.Substances

Component	Common Name	CAS No	Index No	Weight%
Silicic acid(H ₄ SiO ₄),tetra sodium salt	No information available	13472-30-5	KE-33700	99-100

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Advice

Show this safety data sheet to the doctor in attendance .Immediate medical attention is Required.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

Ingestion

Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing

Media

CO₂, dry chemical, dry sand, alcohol- resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes.

Hazardous Combustion Products

Sodium oxides ,Silicon dioxide.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system.

Methods and Material for Containment and Cleaning Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

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SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing.. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

Conditions for Safe Storage, Including any Incompatibilities

Corrosives area. Keep container slightly closed in a dry ,cool and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	CAS No
Silicic acid (H ₄ SiO ₄), tetra sodium salt	13472-30-5

Biological Exposure Indices

Component	CAS No
Silicic acid (H ₄ SiO ₄), tetra sodium salt	13472-30-5

Exposure Controls

Engineering Measures

Ensure that eye wash station and safety showers are close to the work station location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of processor equipment changes to minimize release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection	Goggles
Hand Protection	Protective gloves
Skin and body protection	Long sleeved clothing

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (Physical State, Color, White Solid Crystalline etc.)

Odor Odorless
OdorThreshold No data available
pH Not applicable

Melting Point/Range No data available
Softening Point No data available
Boiling Point/Range No information available
Flash Point No information available

Evaporation Rate Not applicable Solid
Flammability(solid, gas) No information available
Explosion Limits No data available

Vapor Pressure No data available
Vapor Density Not applicable Solid
Specific Gravity/Density No data available
Bulk Density No data available
WaterSolubility Soluble in water
Solubilityinothersolvents No information available

Partition Coefficient(n-octanol/water)

Component	CAS No	Log Pow
Silicic acid(H ₄ SiO ₄),tetra sodium salt	13472-30-5	No data available

Auto ignition Temperature No data available
Decomposition Temperature No data available
Viscosity Not applicable Solid
Molecular Formula Na₄SiO₄
Molecular Weight 184.04
Explosive Properties No information available
Oxidizing Properties No information available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	None known, based on information available
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	
Hazardous Polymerization	No information available.
Hazardous Reactions	None under normal processing.
Incompatible Materials	Strong oxidizing agents. Bases.
Hazardous Decomposition Products	Sodium oxides.Silicon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

(a) Acute toxicity :Not classified

Sodium Ortho silicate(6834-92-0)	
LD50oralrat	1280mg/kg
ATEUS(oral)	1280.000mg/kg body weight

Skin corrosion/irritation	:Causes severe skin burns and eye damage.
Serious eye damage/irritation	:Causes serious eye damage.
Respiratory or skin sensitization	:Not classified
Germ cell mutagenicity	:Not classified
Carcinogenicity	:Not classified
Reproductive toxicity	:Not classified
Specific target organ toxicity(single exposure)	:May cause respiratory irritation.
Specific target organ toxicity(repeated exposure)	:Not classified
Aspiration hazard	:Not classified
Potential Adverse human health effects and symptoms	:Sodium orthosilicate is a caustic material that can cause severe irritation and caustic burns.
Symptoms/injuries after inhalation	May cause respiratory irritation

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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects

Component	CAS No	Fresh water Fish	Water Flea	Fresh water Algae	Microtox
Silicic acid(H ₄ SiO ₄),tetra sodium salt	13472-30-5	No data available	No data available	No data available	No data available

Persistence and degradability

Persistence

Soluble in water, Persistence is unlikely, based on information available.

Bioaccumulative potential

Bioaccumulation is unlikely

Mobility in soil

The product is water soluble, and may spread in water systems Will likely be mobile in the Environment due to its water solubility. Highly mobile in soils.

OzoneDepletionPotential

Component	CAS No	Ozone Depletion Potential
Silicic acid(H ₄ SiO ₄),tetra sodium salt	13472-30-5	Not listed

Other adwers eeffects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Sewage disposal recommendations

Do not dispose of waste into sewer.

Waste disposal recommendations

Landfill. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials

Avoid release to the environment

SECTION 14: TRANSPORT INFORMATION

UN-No	UN1759
Proper Shipping Name	Corrosive solid,n.o.s.
Technical Shipping Name	Sodium orthosilicate
Hazard Class	8
Packing Group	II
IATA	
UN-No	UN1759
ProperShippingName	CORROSIVESOLID,N.O.S*
TechnicalShippingName	Sodium orthosilicate
HazardClass	8
PackingGroup	II

IMDG/IMO

UN-No	UN1759
Proper Shipping Name	CORROSIVESOLID,N.O.S.*
Technical Shipping Name	Sodium orthosilicate
Hazard Class	8
Packing Group	II
Marine Pollutant	No hazards identified

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

Sodium Orthosilicate (13472-30-5)

TSCA: All ingredients of this material are listed on the TSCA inventory.

FDA: The use of sodium Ortho silicate is authorized by FDA as a boiler water additive for the production of steam that will contact food pursuant to 21 CFR and as a GRAS substance pursuant to 21 CFR for use in washing and lye peeling of fruits, vegetables, and nuts; as a denuding agent for tripe; a hog scald agent in removing hair; and as a corrosion preventative in canned and bottled water

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

Component	CAS No	KECL	TSCA	EINECS	IECSC	DSL	NDSL	PICCS	ENCS	ISHL	AICS
Silicic acid(H ₄ SiO ₄), tetra sodium salt	13472-30-5	KE-33700	X	236-741-3	X	X	-	X	X	X	X

Legend: X-Listed' -'-Not Listed

SECTION 16: OTHER INFORMATION

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

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