



MATERIAL SAFETY DATA SHEET

SODIUM METASILICATE PENTAHYDRATE

1. IDENTIFICATION

1.1. IDENTIFICATION OF THE SUBSTANCE

CHEMICAL NAME :.....Sodium metasilicate pentahydrate or
 Disodiumtrioxosilicate, pentahydrate
 FORMULA :.....Na₂SiO₃.5H₂O
 CAS N° :.....10213 – 79 – 3

CHEMICAL FAMILY :.....Soluble sodiumsilicates with molar ratio of 1.0

1.2. USE OF THE SUBSTANCE

Raw materials for industrial products (silica sols, silica gels, precipitated silicas, zeolites, aluminosilicates, magnesium silicates, synthetic clays, ceramics, and catalysts)

Detergents (fabric washing powders, dishwasher detergents, industrial cleansing agents)

Adhesives and binders (paperboard and cardboard, coal dust briquettes, roofing tiles, bricks and ceramics, refractory cements, plasters and mortars, foundry molds and cores, and welding rods)

Surface Coatings (TiO₂ production, concrete, paints for masonry and glass surfaces, fire-proof glass, spray-coating in tunnel construction and mining)

Water Treatment (corrosion protection)

Pulp and paper manufacture (deinking and bleaching)

Civil Engineering (soil sealing and stabilisation in drilling, tunnelling, and mining, sealing of landfills, building pits, and coastline stabilisation)

Enhanced Oil Recovery (oil flow improvers)

Textile processing (bleach and dye stabilizer)

Ceramic products (liquefying agent in porcelain slips)

1.3. IDENTIFICATION OF THE COMPANY

Manufacturer:	
PHARMCO-AAPER.	
58 Vale Road	1101 Isaac Shelby Drive
Brookfield, Connecticut 06804,	Shelbyville, KY 40065
Phone (203) 740-3471	Phone (502) 633-0650
Fax (203) 740-3481	Fax (502) 633-0685

2. INFORMATION ON INGREDIENTS

2.1. COMPOSITION

Einecs-Nr 229 – 912 – 9

100% disodiumtrioxosilicate, pentahydrate.....CAS N° : 10213 – 79 – 3

2.2. CLASSIFICATION

C (corrosive) :.....R34 : Causes burns
 R37 : Irritation to respiratory system

3. HAZARD IDENTIFICATION

Strongly alkaline product

Corrosive to eyes and skin

Irritating to respiratory system

4. FIRST AID MEASURES

4.1. GENERAL INFORMATION

Speed in removal of material is of prime importance

Workplace should be equipped with shower and eye rinsing apparatus.

Remove soiled clothing immediately

Medical attention required

4.2. SYMPTOMS AND EFFECTS

Causes burns. Irritating to respiratory system. Causes injury to the cornea and eyelids. Ingestion of product (or formulations containing > 10% of this product) can result in serious injury to health.

Ingestion : If the victim is conscious, rinse the mouth, allow water to be drunk Do not induce vomiting

Inhalation : Bring to fresh air, rinse mouth and nose with fresh

water
Skin contact : Remove material and contaminated clothing. Wash off with plenty of water

Eye contact : Immediately rinse thoroughly with water during 15 minutes

MEDICAL ATTENTION REQUIRED

5. FIRE-FIGHTING MEASURES

THE PRODUCT IS NON FLAMMABLE

Suitable extinguishing media : Not applicable. Inorganic material. Not combustible, therefore define extinguishing measures according to neighbouring conditions

Exposure hazards arising from material or its combustion products : none

Special protective fire-fighting equipment: none

6. ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS

Avoid contact with skin and eyes, do not breathe dust. See title 8

Spillages can cause slippery situations

Keep away from food, drink and animal feedingstuffs.

6.2. ENVIRONMENTAL PRECAUTIONS

Do not allow to enter drains or water courses. Prevent the spreading of the product into the environment by diking with soil or other absorbent material

Contact the authorities in case of large

6.3. METHODS OF CLEANING

Collect as much as possible in a (clean) container or by absorbent material

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

See also title 13

7. HANDLING AND STORAGE

7.1. HANDLING

Avoid the creation of dust, do not breathe dust

Wash thoroughly after handling

Avoid contact with the concentrated product, see title 8

7.2. STORAGE

Keep packaging / storage vessel closed

Compatible materials :
(Stainless) steel

Incompatible materials : Zinc, Tin, Aluminum, Cupper and their alloys

Protect packaging from freezing, rain or direct sun

Keep away from acids
See also title 10

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. EXPOSURE CONTROLE

Engineering measures / system design such as to prevent formation of or exposure to dust.

8.2. PERSONAL PROTECTION

Respiratory protection : in the eventual risk of dust formation, prevent breathing of the dust (respirator with filter P2)

Hand protection : wear alkaline resistant gloves (natural latex), type EN 374, cat 3 Breakthrough time < 0.9 µg/cm²/min

Eye protection : wear suitable tightly fitting goggles

Skin protection : wear suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :white granules, odourless, hygroscopic

pH :± 12.5 (1% solution)

Bulk density :0.9 – 1.0 kg/l

Boiling point/ range:.....± 110°C

Melting point/ range:.....± 72°C

Water solubility :complete

10. STABILITY AND REACTIVITY

Stability : stable under recommended storage and handling conditions

Conditions to avoid : Avoid prolonged contact with ambient air : hygroscopic behaviour may induce formation of lumps.

Avoid contact in concentrated form with acids.

Materials to avoid : avoid contact with Aluminum, Zinc, Tin, Cupper and their alloys

Hazardous decomposition products : Can form hydrogen if brought in contact with the above incompatible materials, causing a risk for explosion. Exothermic reaction with acids.

11. TOXICOLOGICAL INFORMATION

The hazard of sodium metasilicates, by all routes, comes from its corrosivity caused by the high alkalinity.

Ingestion : LD50 Rat : 600 - 1350 mg/kg

Eye : Corrosive. May cause serious damage to eye, unless treated immediately

Skin : Corrosive

Inhalation : irritating to respiratory system

12. ECOLOGICAL INFORMATION

General consideration : 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. However, the pH of most undiluted silicate solutions is above acceptable limits for direct discharge into waterbodies.

Mobility : not mobile

Biodegradability : not applicable on inorganic substances

Ecotoxicity :

Accumulation : no

LC Fish : 3185mg product/litre (by analogy with sodiumsilicate with MR 3.36, 35%)

EC⁵⁰ Bacteria : > 1000mg product/litre (by analogy with sodiumsilicate with MR 3.36, 35%)

EC⁵⁰₅₀ Daphnia: 4857mg product/litre (by analogy with sodiumsilicate with MR 3.2, 35%)

13. DISPOSAL CONSIDERATIONS

Waste disposal according national or regional regulations, neutralisation prior to disposal is advisory

EWC (European Waste Catalog) -number : 06 02 99

Dispose contaminated packaging according national or regional regulations, preliminary cleaning with water is advisory

14. TRANSPORT INFORMATION

UN Substance Identification Number : UN 3253

UN Class :

UN Proper shipping name :
.....disodiumtrioxosilicate

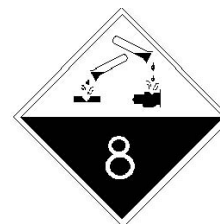
.....8

This material is NOT a Marine Pollutant (IMDG/IMO: page 8166-1)

UN Packing group :

see title 7.2 for incompatible materials

.....III



15. REGULATORY INFORMATION

• Hazard symbols :
Corrosive (C)

• R-phrases :

R34 : Causes burns

R37 : Irritation to respiratory system

• S-phrases :

S24/25: Avoid contact with skin and eyes.

S13: Keep away from food, drink and animal feedingstuffs.

S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection

(show the label where possible).

(only for general public applications S2 : Keep out of reach of children)

S45: In case of accident or if you feel unwell, seek medical advice immediately

16. OTHER INFORMATION

The product is meant for professional / industrial use

The information contained herein is based on data considered to be accurate. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use of the product.