

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	METSO BEADS® 2048 Sodium metasilicate
Alternative names	Sodium metasilicate (anhydrous)
CAS No.	6834-92-0
EINECS No.	2299129

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

Identified use(s)	General purpose industrial chemical for use in a wide range of applications. Complexing agent ; Corrosion inhibitor ; Flame retardant or fire preventing agent ; Flotation agent ; pH Regulating agent ; Viscosity control agent
Uses advised against	See also Annex to the extended Safety Data Sheet. None known.

1.3 Details of the supplier of the safety data sheet

Company Identification	Cooper Natural Resources Inc. 7755 Bellaire Drive South Ft Worth, TX 76132
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Telephone:	817-244-9700
E-Mail (competent person)	

1.4 Emergency telephone number	+1 800-424-9300
Emergency Phone No.	

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

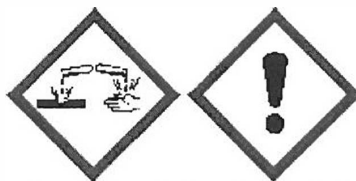
GHS Classification	Skin Corr. 1B / Eye Dam. 1 STOT SE 3 Met. Corr. 1
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EC Classification	CORROSIVE
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Hazards summary	Alkaline. Causes burns. Irritating to respiratory system. May cause permanent damage to eyes. Can etch glass if not promptly removed.
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2.2 Label elements

Hazard pictogram(s)



Signal word(s)

Danger

Hazard statement(s) H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.
H290: May be corrosive to metals.

Precautionary statement(s) P261: Avoid breathing dust.
P262: Do not get in eyes, on skin, or on clothing.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361 +P353: IF ON SKIN (or hair): Remove/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.

EC Classification

CORROSIVE

Hazard Symbol



Risk Phrases

R34: Causes burns.
R37: Irritating to respiratory system.

Safety Phrases

S1/2: Keep locked up and out of the reach of children.
S13: Keep away from food, drink and animal feedingstuffs.
S24/25: Avoid contact with skin and eyes.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards

Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Regulation (EC) No. 1272/2008 (CLP)

Ingredient(s)	%W/W	CAS No.	EINECS No. I REACH Registration	Hazard symbol(s) and hazard statement(s)
Silicic acid, disodium salt; Disodium metasilicate	100	6834-92-0	2299129	H314: Skin Corr. 1B Eye Dam. 1; H335 : STOT SE 3; H290 : Met. Corr. 1;

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

Skin Contact Wash affected skin with plenty of water. Continue to wash the affected area for at least 15 minutes. Obtain medical attention.

Inhalation	Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention.
Ingestion	Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Alkaline. Causes burns.
Irritating to respiratory system.
May cause permanent damage to eyes.
Obtain immediate medical attention.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Compatible with all standard fire fighting techniques.

Unsuitable extinguishing Media

None known.

5.2 Special hazards arising from the substance or mixture

Not applicable. Inorganic powder or granules. Non-combustible.

5.3 Advice for fire-fighters

None.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing. Wear eye/face protection.
An approved dust mask should be worn if dust is generated during handling.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

6.3 Methods and materials for containment and cleaning up

Caution - spillages may be slippery. Avoid generation of dust.
Sweep or preferably vacuum up and collect in suitable containers for recovery or disposal.

6.4 Reference to other sections

See also Section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing.
Avoid generation of dust.
Emergency shower and eye wash facilities should be readily available.

See Also Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed and dry. In case of high humidity or storage for extended periods of time, use plastic bags to enclose product containers to avoid caking.

Unsuitable containers: Aluminium

See Also Section 10.

7.3 Specific end use(s)

Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

SUBSTANCE.	Occupational Exposure Limits
Disodium metasilicate	No Occupational Exposure Limit assigned. An exposure limit of 2 mg/m ³ (15 min TWA) is recommended by analogy with sodium hydroxide (UK EH40).

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the work place. Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

8.2.2 Personal Protection

Respiratory protection

Avoid inhalation of dusts. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or where there is any risk of the exposure limits being exceeded. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53. Chemical goggles (EN 166).

Eye/face protection

Skin protection

Wear suitable protective clothing and gloves. PVC or rubber gloves. For example EN374-3. Wear suitable overalls.

8.2.3 Environmental Exposure Controls

The primary hazard of sodium silicate is the alkalinity. Avoid generation of dust. Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Powder. Granules. White.
Odour	Odourless.
Odour Threshold (ppm)	Not applicable.
pH (Value)	Strongly alkaline. Approx 14
Freezing Point (°C)	Not applicable.
Melting Point (°C)	1089
Boiling Point (°C)	Not applicable.
Flash Point (°C) [Closed cup]	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not applicable.
Vapour Pressure (mm Hg)	Not applicable.
Vapour Density (Air-1)	Not applicable.
Density (g/ml)	No data.
Solubility (Water)	Soluble.
Solubility (Other)	No data.
Partition Coefficient	No data.
Auto Ignition Point (°C)	Not applicable.
Decomposition Temperature (°C)	Not applicable.
Viscosity (mPa. s)	Not applicable.
Explosive properties	Not applicable.
Oxidising Properties	Not applicable.

9.2 Other information

Bulk density: Approximately 68 lbs/ft³ untamped, 77 lbs/ft³ tamped

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

See Section: 10.3

10.2 Chemical stability

This product is hygroscopic.

10.3 Possibility of hazardous reactions

When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide.

10.4 Conditions to avoid

See Section: 10.3

10.5 Incompatible materials

See Section: 10.3

10.6 Hazardous decomposition product(s)

Hydrogen

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Ingestion

Material will cause chemical burns. All symptoms of acute toxicity are due to high alkalinity.

Oral LD50 (rat) 1152-1349 mg/kg bw

Inhalation

Dust is severely irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity.

Inhalation LC50 (rat) >2.06 g/m³

Skin Contact

Material will cause chemical burns.

Dermal LD50 (rat) >5000 mg/kg bw

Eye Contact

Material will cause chemical burns. May cause permanent damage if eye is not immediately irrigated.

Skin corrosion/irritation

Corrosive to: Skin.

Serious eye damage/irritation

Corrosive to: Eyes.

Sensitisation

Not sensitising. (LLNA)

Mutagenicity

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

Carcinogenicity

Components are not listed by IARC, NTP or OSHA as carcinogens.

Reproductive toxicity

No evidence of reproductive toxicity or developmental toxicity.

STOT - single exposure

Irritating to respiratory system.

STOT - repeated exposure

Not classified. NOAEL oral (rat) 227 mg/kg bw/d

Aspiration hazard

Not classified

Other information

Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Fish (Brachydanio rerio) LC50 (96 hour) 210 mg/l

Aquatic invertebrates: (Daphnia magna) EC50 (48 hour) 1700 mg/l

12.2 Persistence and degradability

Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.

12.3 Bioaccumulative potential

Inorganic. The substance has no potential for bioaccumulation.

12.4 Mobility in soil

Not applicable.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

12.6 Other adverse effects

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

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of this material and its container to hazardous or special waste collection point. This material is classified as hazardous waste under EC Directive 2008/98/EC. This material is classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894. This material is classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894.

Disposed water/wet solutions containing this material are classified as RCRA hazardous waste if they exhibit the corrosive characteristic (pH greater than or equal to 12.5).

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number	3262
14.2 Proper Shipping Name	Corrosive Solid, Basic, Inorganic, n.o.s. (Sodium metasilicate, Anhydrous)
14.3 Transport hazard class(es)	8
14.4 Packing group	I
14.5 Environmental hazards	Not classified as a Marine Pollutant.
14.6 Special precautions for user	Unsuitable containers: Aluminium

SECTION 15: REGULATORY INFORMATION

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

TSCA Inventory Status: Reported/Included.

AICS Inventory Status: Reported/Included.

DSUNDSL Inventory Status: Reported/Included.

German Water Hazard Classification VwVwS: Product D number 847, WGK class 1 (low hazard to water).

15.2 Chemical Safety Assessment Information available on request.

SECTION 16: OTHER INFORMATION

Data referenced in this eSDS is from company-owned information and from data legitimately accessed by PQ Corporation through membership of Industry Consortia or other agreements. This includes data relating to toxicology, ecotoxicology, DNELs, PNECs and other information in this eSDS and its annex.

This SDS was last reviewed: 04/2013

The following sections contain revisions or new statements: All sections updated to comply with Regulation (EC) No.1907/2006 (REACH) and Regulation (EC) No.1272/2008 (CLP) and their amendments.

EC Classification No. 67/548/EEC
Hazard Symbol

CORROSIVE



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STOT SE 3
Met. Corr. 1

Signal word(s)

Hazard pictogram(s)



Hazard statement(s)

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