

Material Safety Data Sheet



SOLID METAL PRO

Section 1. Chemical product and company identification

Trade name : SOLID METAL PRO
Product use : Machine Warewashing Detergent
Supplier : Ecolab Co.
5105 Tomken Road
Mississauga ON L4W 2X5
1-800-352-5326
Code : 990838
Date of issue : 15-July-2009

EMERGENCY HEALTH INFORMATION: 1-800-328-0026
Outside United States and Canada CALL 1-651-222-5352 (in USA)

Section 2. Hazards identification

Physical state : Solid. [Cast Solid]

Emergency overview : WARNING !

CAUSES SEVERE EYE AND SKIN IRRITATION.
Untreated contact may cause severe irritation or chemical burns.
CAUSES DIGESTIVE TRACT BURNS.
Do not ingest. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling.

Routes of entry : Skin contact, Eye contact, Ingestion

Potential acute health effects

Eyes : Severely irritating to eyes. Untreated contact may cause chemical burns.

Skin : Severely irritating to the skin. Untreated contact may cause severe irritation or chemical burns.

Inhalation : No known significant effects or critical hazards.

Ingestion : Causes burns to mouth, throat and stomach.

See toxicological information (section 11)

Section 3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
Sodium metasilicate nonahydrate	13517-24-3	40 - 70
triphosphoric acid, pentasodium salt, hexahydrate	15091-98-2	15 - 40
SODIUM CARBONATE	497-19-8	10 - 30
SODIUM METASILICATE	6834-92-0	3 - 7

Section 4. First-aid measures

Eye contact : In case of contact, immediately flush eyes with cool running water. Remove contact lenses and continue flushing with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : If inhaled, remove to fresh air.

Ingestion : If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire-fighting measures

- Auto-ignition temperature** : Not available.
- Flash point** : > 100°C
Product does not support combustion.
- Flammable limits** : Not available.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides
metal oxide/oxides
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.

Dyke area of fire to prevent runoff.
No specific fire or explosion hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Risk of explosion of the product in the presence of mechanical impact: Not available.

Risk of explosion of the product in the presence of static discharge: Not available.

Section 6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Stop leak if without risk. Use suitable protective equipment. Keep unnecessary personnel away. Do not touch or walk through spilt material.
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : If emergency personnel are unavailable, vacuum or carefully scoop up spilt material and place in an appropriate container for disposal.

Section 7. Handling and storage

- Handling** : Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Wash thoroughly after handling.
- Storage** : Keep out of reach of children. Keep container in a cool, well-ventilated area. Keep container tightly closed.
Do not store above the following temperature: 40°C

Section 8. Exposure controls/personal protection

- Engineering measures** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protection :

- Eyes** : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.
- Hands** : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.
- Skin** : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.
- Respiratory** : A respirator is not needed under normal and intended conditions of product use.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state	: Solid. [Cast Solid]
Colour	: Blue. [Light]
Odour	: Odourless.
pH	: 12.1 [Conc. (% w/w): 1%]
Boiling/condensation point	: Not available.
Melting/freezing point	: Not available.
Vapour pressure	: Not available.
Vapour density	: Not available.
Odour threshold	: Not available.
Evaporation rate	: Not available.
LogK _{ow}	: Not available.
Dispersibility properties	: Easily dispersible in the following materials: cold water and hot water.
Solubility	: Easily soluble in the following materials: cold water and hot water.

Section 10. Stability and reactivity

Stability	: The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions of instability	: Not available.
Reactivity	: Highly reactive or incompatible with the following materials: acids. Slightly reactive or incompatible with the following materials: organic materials and moisture.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerisation	: Under normal conditions of storage and use, hazardous polymerisation will not occur.

Section 11. Toxicological information

Potential acute health effects

Eyes	: Severely irritating to eyes. Untreated contact may cause chemical burns.
Skin	: Severely irritating to the skin. Untreated contact may cause severe irritation or chemical burns.
Inhalation	: No known significant effects or critical hazards.
Ingestion	: Causes burns to mouth, throat and stomach.

Potential chronic health effects

Carcinogenic effects	: No known significant effects or critical hazards.
Mutagenic effects	: No known significant effects or critical hazards.
Teratogenic effects	: No known significant effects or critical hazards.
Reproductive effects	: No known significant effects or critical hazards.
Sensitization to Product	: No known significant effects or critical hazards.
Synergistic products (toxicologically)	: Not available.

Toxicity data

<u>Ingredient name</u>	<u>Test</u>	<u>Route</u>	<u>Result</u>	<u>Species</u>
disodium metasilicate	LD50	Oral	>1000 mg/kg	Rat
	LD50	Oral	770 mg/kg	Mouse
	LD50	Oral	1153 mg/kg	Rat
sodium carbonate	LD50	Dermal	>2000 mg/kg	Rabbit
	LD50	Oral	6600 mg/kg	Mouse
	LD50	Oral	4090 mg/kg	Rat
	LC50	Inhalation	2300 mg/m ³	Rat

Other adverse effects

Target organs	: Not available.
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Section 12. Ecological information

Ecotoxicity

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
disodium metasilicate	Daphnia	48 hours	Acute EC50 4857 mg/L
	Fish	96 hours	Acute LC50 3185 mg/L
sodium carbonate	Fish	96 hours	Acute LC50 2320 mg/L
	Daphnia	48 hours	Acute EC50 347 mg/L
	Daphnia - Water flea - Neonate - 24 hours	48 hours	Acute EC50 199.82 to 298.9 mg/L Fresh water
	Fish	96 hours	Acute LC50 740 mg/L
	Fish	96 hours	Acute LC50 <850 mg/l
	Fish	96 hours	Acute LC50 320 mg/l
	Fish	96 hours	Acute LC50 300 mg/l
	Fish - Bluegill	96 hours	Acute LC50 320000 ug/L Fresh water
	Fish - Bluegill - 3.88 cm - 0.96 g	96 hours	Acute LC50 300000 ug/L Fresh water
	Daphnia - Water flea	48 hours	Acute LC50 265000 ug/L Fresh water
	Fish - Western mosquitofish - Adult	96 hours	Acute LC50 740000 ug/L Fresh water
	Daphnia - Water flea - 24 hours	48 hours	Acute LC50 1640000 to 2030000 ug/L Fresh water
	Daphnia - Water flea - 24 hours	48 hours	Acute LC50 1020000 to 1170000 ug/L Fresh water
Daphnia - Water flea	48 hours	Acute LC50 565000 ug/L Fresh water	
Fish - Fathead minnow - 1 to 7 days	96 hours	Acute LC50 <850000 ug/L Fresh water	

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

UN Classification

UN number	UN3253
Proper shipping name	DISODIUM TRIOXOSILICATE
Class	8
Packing group	III

See shipping documents for specific transportation information.

Section 15. Regulatory information

WHMIS : Class E: Corrosive material
Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

Section 16. Other information

Hazardous Material Information System (U.S.A.) :	Health	2
	Flammability	0
	Physical hazards	0

Date of issue : 15-July-2009.
Responsible name : Regulatory Affairs
1-800-352-5326
Date of previous issue : 19-December-2008.

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.