

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								
					ACGIH		NOHSC			OSHA			OTHER
					ppm		ppm			ppm			
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
SODIUM METASILICATE PENTAHYDRATE	6834-92-0	VV9275000	229-912-9	1-5	NA	NA	NF	NF	NF	NA	NA	NA	
Acute Tox. 4; Skin Corr. 1B; Serious Eye Dam. 1; STOT SE 3; H302, H314, H335													



SAFETY DATA SHEET

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision: 3.0

SDS Revision Date: 12/26/2014

4. FIRST AID MEASURES

4.1	First Aid:	<p><u>Ingestion:</u> DO NOT INDUCE VOMITING. Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p><u>Eyes:</u> Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention.</p> <p><u>Skin:</u> Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p><u>Inhalation:</u> Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.</p>															
4.2	Medical Conditions Aggravated by Exposure:	<p>Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).</p> <table><tr><td colspan="2">HEALTH</td><td>2</td></tr><tr><td colspan="2">FLAMMABILITY</td><td>0</td></tr><tr><td colspan="2">PHYSICAL HAZARDS</td><td>0</td></tr><tr><td colspan="2">PROTECTIVE EQUIPMENT</td><td>B</td></tr><tr><td>EYES</td><td>SKIN</td><td></td></tr></table>	HEALTH		2	FLAMMABILITY		0	PHYSICAL HAZARDS		0	PROTECTIVE EQUIPMENT		B	EYES	SKIN	
HEALTH		2															
FLAMMABILITY		0															
PHYSICAL HAZARDS		0															
PROTECTIVE EQUIPMENT		B															
EYES	SKIN																

5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This material can burn but will not readily ignite. This material will release vapors (toxic fumes of sodium oxide) when heated above the flash point temperature that can ignite when exposed to a source of ignition. Toxic fumes of sodium oxide.	
5.2	Extinguishing Methods:	Dry chemical, foam, carbon dioxide, and water fog.	
5.3	Firefighting Procedures:	Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Avoid spraying water directly into storage containers because of danger of boil over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.	

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	<p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. CAUTION – may be slippery if spilled.</p> <p>For <u>small spills</u> (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows) and secure all sources of ignition. Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</p> <p>For <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p>
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Use normal hygiene practices. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking. Good personal hygiene practices, such as washing any skin contact areas and removing contaminated clothing, are recommended.
7.2	Storage & Handling:	<p>Keep away from sources of heat.</p> <p><u>Maximum Recommended Shelf-Life:</u> 36 months</p>
7.3	Special Precautions:	Follow all instructions on product label. Keep container closed when not in use. Keep this and all chemicals out of reach of children.



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8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls:	Not required under normal conditions of use. Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation).	
8.2	Respiratory Protection:	Not required under normal conditions of use. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.	
8.3	Eye Protection:	Avoid eye contact. Protective eyewear that conforms to ANSI Z87.1 (or other applicable and appropriate standards) should be used when handling any chemical product.	
8.4	Hand Protection:	Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected.	
8.5	Body Protection:	Not required under normal conditions of use. Use appropriate protective equipment (e.g., apron) as necessary to prevent or reduce exposure if frequent or prolonged contact is expected.	

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Pink liquid
9.2	Odor:	NA
9.3	Odor Threshold:	NA
9.4	pH:	12-13
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	NA
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	NA
9.12	Solubility:	Soluble
9.13	Partition Coefficient (log P _{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions of use.
10.2	Hazardous Decomposition Products:	None known.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Strong oxidizers and reducing agents.
10.5	Incompatible Substances:	Strong oxidizing agents, strong acids and bases.

11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: NO	Ingestion: YES
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data.		
11.3	Acute Toxicity:	See section 2.4		
11.4	Chronic Toxicity:	See section 2.5		
11.5	Suspected Carcinogen:	No.		
11.6	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to produce teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.		
11.7	Irritancy of Product:	See section 2.3		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		



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12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	There are no specific data available for this product.
12.2	Effects on Plants & Animals:	There are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS



13.1	Waste Disposal:	Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Any disposal practice must be in compliance with local, state, and federal laws and regulations.
13.2	Special Considerations:	NA

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	NOT REGULATED	
14.2	IATA (AIR):	NOT REGULATED	
14.3	IMDG (OCN):	NOT REGULATED	
14.4	TDGR (Canadian GND):	NOT REGULATED	
14.5	ADR/RID (EU):	NOT REGULATED	
14.6	SCT (MEXICO):	NOT REGULATED	
14.7	ADGR (AUS):	NOT REGULATED	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.	
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.	
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.	
15.4	CERCLA Reportable Quantity (RQ):	NA	
15.5	Other Federal Requirements:	This material does not contain any hazardous air pollutants. None of the components in this product are listed as priority pollutants under the CWA. None of the components in this product are listed as toxic pollutants under the CWA.	
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS D2B (Other Toxic Effects)	
15.7	State Regulatory Information:	No ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).	
15.8	Other Requirements:	The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC: Irritant (Xi). <u>Risk Phrases</u> (R): 36/37/38 – Irritating to eyes, skin and respiratory system. <u>Safety Phrases</u> (S): 2-36/37-46 – Keep out of reach of children. Wear suitable protective clothing and gloves. If swallowed, seek medical advice immediately and show this container or label.	



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16. OTHER INFORMATION

16.1	Other Information:	WARNING! MAY BE HARMFUL IF SWALLOWED. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. Wash hands and exposed skin areas with soap and water thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed. Store locked up. KEEP OUT OF REACH OF CHILDREN.	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's and K&N Engineering, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for:	K&N Engineering, Inc. P.O. Box 1329 Riverside, CA 92502-1329 USA Tel: +1 (800) 858-3333 Fax: +1 (951) 826-4001 E-Mail: tech@knfilters.com http://www.knfilters.com	
16.5	Prepared by:	ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com	



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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
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EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
C	Ceiling Limit
IDLH	Immediately Dangerous to Life and Health
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
TLV	Threshold Limit Value

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A	
B	
C	
D	
E	
F	

G	
H	
I	
J	
K	
X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Synthetic Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

ML	Maximum Limit
NA	Not Available
ND	Not Determined
NE	Not Established
NF	Not Found
NR	No Results
SCBA	Self-Contained Breathing Apparatus

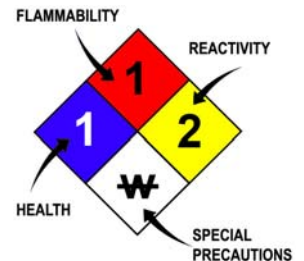
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
W	Use No Water
OX	Oxidizer
TREFOIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD ₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD ₀₁ , LD ₀₁ & LD ₀₁ or TC, TC ₀₁ , LC ₀₁ & LC ₀₁	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL _m	Median threshold limit
log K _{OW} or log K _{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

C	E	F	N	O	T	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful/Irritating	Health Hazard	Environment

CHEMTREC In-Country Dial Numbers	Local # Provided in Country	Toll Free in Country*	Greeting Language
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AFRICA			
CHEMTREC South Africa*		0-800-983-611	English

SOUTH AMERICA			
CHEMTREC Argentina (Buenos Aires)	+(54)-1159839431		Latin American Spanish
CHEMTREC Brazil (Rio De Janeiro)	+(55)-2139581449		Portuguese
CHEMTREC Chile (Santiago)	+(56)-225814934		Latin American Spanish
CHEMTREC Colombia *		01800-710-2151	Latin American Spanish
CHEMTREC Mexico*		01-800-681-9531	Latin American Spanish
CHEMTREC Peru (Lima)	+(51)-17071295		Latin American Spanish

ASIA			
CHEMTREC China*	4001-204937		Mandarin
CHEMTREC Hong Kong (Hong Kong)*		800-968-793	Cantonese
CHEMTREC India *		000-800-100-7141	Hindi
CHEMTREC Indonesia*		001-803-017-9114	Indonesian
CHEMTREC Japan (Tokyo)	+(81)-345209637		Japanese
CHEMTREC Malaysia *		1-800-815-308	Malay
CHEMTREC Philippines *		1-800-1-116-1020	Tagalog
CHEMTREC Philippines (Manila)	+(63) 632-395-3308		Tagalog
CHEMTREC Singapore*		800-101-2201	English and Mandarin
CHEMTREC Singapore	+(65)-31581349		English and Mandarin
CHEMTREC South Korea*		00-308-13-2549	Korean
CHEMTREC Taiwan*		00801-14-8954	Mandarin
CHEMTREC Thailand *		001-800-13-203-9987	Thai

AUSTRALASIA			
CHEMTREC Australia (Sydney)	+(61)-290372994		English
CHEMTREC New Zealand (Auckland)*	+(64)-98010034		English

EUROPE			
CHEMTREC Belgium (Brussels)	+(32)-28083237		French and Flemish
CHEMTREC Czech Republic (Prague)	+(420)-228880039		Czech
CHEMTREC Denmark	+(45)-69918573		Danish
CHEMTREC France	+(33)-975181407		French
CHEMTREC Germany *		0800-181-7059	German
CHEMTREC Hungary (Budapest)	+(36)-18088425		Hungarian
CHEMTREC Italy *		800-789-767	Italian
CHEMTREC Italy (Milan)	+(39)-0245557031		Italian
CHEMTREC Netherlands	+(31)-858880596		Dutch
CHEMTREC Poland (Warsaw)	+(48)-223988029		Polish
CHEMTREC Portugal	+(351)-308801773		Portuguese
CHEMTREC Russia*		8-800-100-6346	Russian
CHEMTREC Slovakia (Bratislava)	+(421)-233057972		Slovak
CHEMTREC Spain*		900-868538	European Spanish
CHEMTREC Sweden (Stockholm)	+(46)-852503403		Swedish
CHEMTREC Switzerland (Zurich)	+(41)-435016715		Swiss German, French and Italian
CHEMTREC UK (London)	+(44)-870-8200418		English

MIDDLE EAST			
CHEMTREC Bahrain (Bahrain)	+(973)-16199372		Arabic
CHEMTREC Israel (Tel Aviv)	+(972)-37630639		Hebrew

***Phone numbers for countries marked with an asterisk must be dialed within the country**