Safety Data Sheet
Toluene

SDS Revision Date: **12/10/2014**

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity	Toluene
Alternate Names	Methacide, Methylbenzene, Methylbenzol, Phenylmethane, Tolu-Sol, Toluene, Toluol

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

Intended use	See Technical Data Sheet.
Application Method	See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name	Thermco Products, Inc. 10 Millpond Drive, Unit #10 Lafayette, NJ 07848
Emergency	
Customer Service: Thermco Products, Inc.	973.300.9100

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Acute Tox. 4;H302	Harmful if swallowed.
Skin Irrit. 2;H315	Causes skin irritation.
Repr. 2;H361D	Suspected of damaging the unborn child.
STOT SE 3;H336	May cause drowsiness or dizziness.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Warning

H302 Harmful if swallowed.
H315 Causes skin irritation.
H336 May cause drowsiness and dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

[Prevention]:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+313 IF exposed or concerned: Get medical advice / attention.
P314 Get Medical advice / attention if you feel unwell.
P321 Specific treatment (see information on this label).
P330 Rinse mouth.
P362 Take off contaminated clothing and wash before reuse.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.
P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Toluene **CAS Number: 0000108-88-3**	**100**	**Flam. Liq. 2;H225** **Repr. 2;H361d** **Asp. Tox. 1;H304** **STOT RE 2;H373** **Skin Irrit. 2;H315** **STOT SE 3;H336**	**[1][2]**

[1] Substance classified with a health or environmental hazard.
[2] Substance with a workplace exposure limit.
[3] PBT-substance or vPvB-substance.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth. If breathing is difficult, give oxygen.
Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Warning: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Eyes Check for and remove contact lenses. Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2. Most important symptoms and effects, both acute and delayed

Overview Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

Inhalation May cause drowsiness or dizziness.

Skin Causes skin irritation.

Ingestion Harmful if swallowed.

5. Fire-fighting measures

5.1. Extinguishing media

Flammable liquid, insoluble in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters

Non-flammable in presence of shocks.
Fire Fighting Media and Instructions:

Special Remarks on Explosion Hazards:
Toluene forms explosive reaction with 1 ,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide; concentrated nitric acid,sulfuric acid + nitric acid; N_2O_4; $AgClO_4$; BrF_3; Uranium hexafluoride; sulfur dichloride. Also forms an explosive mixture with tetranitromethane.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water ways.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Protection in Case of a Large Spill:
Lab coat. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Large Spill: Toxic flammable liquid, insoluble or very slightly soluble in water.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined area; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride. Frozen Bromine trifluoride reacts violently with Toluene at -80 deg. C.

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000108-88-3	Toluene	OSHA	TWA 200 ppm C 300 ppm 500 ppm (10-minute maximum peak)STEL 150 ppm
		ACGIH	TWA: 20 ppmR
		NIOSH	TWA 100 ppm (375 mg/m3) ST 150 ppm (560 mg/m3)
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000108-88-3	Toluene	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;

8.2. Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes Splash goggles.

Skin Lab coat. Gloves.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Personal Protection in Case of a Large Spill:
Lab coat. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.
Ensure that eyewash stations and safety showers are proximal to the work-station location.
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Colorless Liquid
Odor	Sweet, pungent, Benzene-like
Odor threshold	1.6 ppm
pH	NA
Melting point / freezing point	-95C(-139F)
Initial boiling point and boiling range	110.6C(231.1F)
Flash Point	NA
Evaporation rate (Ether = 1)	NA
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** NA **Upper Explosive Limit:** NA
Vapor pressure	3.8 kPa (@25C)
Vapor Density	3.1 (Air = 1)
Specific Gravity	0.8636(Water = 1)
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity (cSt)	NA
VOC %	NA
Coefficient of Oil/Water Distribution	The product is more soluble in oil; log(oil/water) = 2 .7
Solubility	Soluble in diethyl ether, acetone. Practically insoluble in cold water. Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide. Solubility in water 0.561 g/l @ 25 deg. C.
Critical Temperature	318.6C (605.5F)
Molecular Weight	92.14 g/mole
Ionicity (in Water)	NA

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

Reacts chemically with nitrogen oxides, or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

10.4. Conditions to avoid

Excessive heat and open flame.

10.5. Incompatible materials

Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride. Frozen Bromine trifluoride reacts violently with Toluene at -80 deg. C.

10.6. Hazardous decomposition products

High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

11. Toxicological information

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

2-butoxyethanol and its acetate are readily absorbed through the skin and will cause harmful effects on the blood.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Toluene - (108-88-3)	636.00, Rat - Category: 4	8,400.00, Rabbit - Category: NA	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	2	Suspected of damaging the unborn child.
STOT-single exposure	3	May cause drowsiness or dizziness.
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

Toxic to aquatic life

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Toluene - (108-88-3)	5.80, Oncorhynchus mykiss	19.60, Daphnia magna	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1294	UN1294	UN1294
14.2. UN proper shipping name	UN1294, Toluene, 3, II	Toluene	Toluene
14.3. Transport hazard class(es)	**DOT Hazard Class:** 3 **DOT Label:** 3	**IMDG:** 3	**Air Class:** 3
14.4. Packing group	II	II	II

14.5. Environmental hazards

IMDG Marine Pollutant:

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification D2A

US EPA Tier II Hazards

Fire: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs (lbs):

Toluene (1,000.00)

EPCRA 302 Extremely Hazardous : (No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

Toluene

Proposition 65 - Carcinogens (>0.0%): (No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):

Toluene

Proposition 65 - Female Repro Toxins (>0.0%): (No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%): (No Product Ingredients Listed)

N.J. RTK Substances (>1%):

Toluene

Penn RTK Substances (>1%):

Toluene

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness and dizziness.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: This information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Document

Safety Data Sheet
All Types of Sand

SDS Revision Date: **12/10/2014**

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity	All Types of Sand
Alternate Names	#0 Sand, #1/4 Sand, #1/2 Sand, #1 Sand, #2 Sand, #3 Sand, All Types of Sand, FP Gravel, # 100 Sand, # 80 Sand, # 70 Sand, # 60 Sand, # 50 Sand, #40 Sand, FS4098, FF4020, BS5005, 710, C-109, C-190, Silicon Dioxide, Silicon Dioxide, Traction Grit, Filter Sand, Silica Flours, Quartz, Flint, Gravel, White Sand, Child Health Sand, All purpose Sand, Concrete Sand, Mason Sand

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

Intended use	See Technical Data Sheet.
Application Method	See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name	Thermco Products, Inc. 10 Millpond Drive, Unit #10 Lafayette, NJ 07848
Emergency	
Customer Service: Thermco Products, Inc.	973.300.9100

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Acute Tox. 4;H332	Harmful if inhaled.
Carc. 1A;H350	May cause cancer.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Warning

H332 Harmful if inhaled.

H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

[Prevention]:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P271 Use only outdoors or in a well-ventilated area.

P281 Use personal protective equipment as required.

[Response]:

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P308+313 IF exposed or concerned: Get medical advice / attention.

P314 Get Medical advice / attention if you feel unwell.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

[Storage]:

P405 Store locked up

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Crystalline Silica - Quartz **CAS Number: 0014808-60-7**	**75 - 100**	**Acute Tox. 4;H332** **STOT RE 2;H373** **Carc. 1A;H350**	**[1][2]**

[1] Substance classified with a health or environmental hazard.
[2] Substance with a workplace exposure limit.
[3] PBT-substance or vPvB-substance.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth. If breathing is difficult, have qualified medical personnel administer oxygen.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview Inhalation: Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects:
Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.
Cancer Status: The international Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans(Group 1- carcinogenic to humans). Refer to IARC Monograph 68, Silica. Some Silicates and Organic Fibres (published in June 1997) in conjunction with the

use of these materials. The National Toxicology Program classifies respirable crystalline silica as "reasonably anticipated to be a carcinogen".
Other Data with Possible Relevance to Human health:
There is some evidence that breathing respirable crystalline silica or the silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.
Eye contact: Contact may cause mechanical irritation and possible injury.
Medical conditions aggravated by exposure: individuals with respiratory disease, including but not limited to, asthma and bronchitis, or subject to eye irritation should not be exposed to respirable quartz dust.
See section 2 for further details.

Inhalation Harmful if inhaled.

5. Fire-fighting measures

5.1. Extinguishing media

This product will not burn but is compatible with all extinguishing media. Use any media that is appropriate for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.

Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters

None

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

If uncontaminated, collect using dustless meth (HEPA vacuum or wet method) and place in appropriate container for use. If contaminated: a) use appropriate method for the nature of contamination, b) consider possible toxic or fire hazards associated with the contaminating substances. Collect for disposal. If uncontaminated, dispose as an inert,

non-metallic mineral. If contaminated, dispose in accordance with all applicable local, state/provincial and federal regulations.

7. Handling and storage

7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.

Do not breathe dust. Do not rely on your sight to determine if dust is in the air. Silica may be in the air without a visible dust cloud. Use normal precautions against bag breakage or spills of bulk material. ANSI/AIHA Z9.4:1997 recommends that silica sand be prohibited as an abrasive blasting agent for use in fixed location abrasive-blast enclosures. Use good housekeeping in storage and use areas to prevent accumulation of dust in work area.
Use adequate ventilation and dust collection. Maintain and use proper, clean respiratory equipment. Launder clothing that has become dusty. Empty containers (bags, bulk containers, storage tanks, etc.) Retain silica residue and must be handled in accordance with the provisions of this material Safety Data sheet. WARN AND TRAIN employees in accordance with state and federal regulation.
WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS - USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARDS AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0014808-60-7	Crystalline Silica - Quartz	OSHA	No Established Limit
		ACGIH	TWA: 0.025 mg/m3A1, 1
		NIOSH	0.05 mg/m3 TWA (respirable)
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0014808-60-7	Crystalline Silica - Quartz	OSHA	Select Carcinogen: No
		NTP	Known: Yes; Suspected: No
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes Protective safety glasses recommended.

Skin Protective gloves recommended.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	White or Tan sand, granular, crushed or ground Solid
Odor	None
Odor threshold	Not Measured
pH	NA
Melting point / freezing point	2930 F/ 1610 C
Initial boiling point and boiling range	4046 F/ 2230 C
Flash Point	(Method Used) Fully oxidized, will not burn.
Evaporation rate (Ether = 1)	NA
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** NA
	Upper Explosive Limit: NA
Vapor pressure (Pa)	NA
Vapor Density	NA
Specific Gravity	(H2O = 1) 2.65
Solubility in Water	Negligible
Partition coefficient n-octanol/water (Log Kow)	Not Measured

Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity (cSt)	NA
VOC %	NA

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.

10.6. Hazardous decomposition products

Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Crystalline Silica - Quartz - (14808-60-7)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable

Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Crystalline Silica - Quartz - (14808-60-7)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	**DOT Hazard Class:** Not Applicable **DOT Label:** ---	**IMDG:** Not Applicable **Sub Class:** Not Applicable	**Air Class:** Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification D2B

US EPA Tier II Hazards

Fire: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs:
(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:
(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):

Crystalline Silica - Quartz

Proposition 65 - Developmental Toxins (>0.0%):
(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):
(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):
(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

Crystalline Silica - Quartz

Penn RTK Substances (>1%):

Crystalline Silica - Quartz

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H332 Harmful if inhaled.
H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: This information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

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