

Safety Data Sheet

Prepared in accordance with GHS standard
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

Revision date: 31-Jan-19

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Section 1: Identification

Product Identifier (Name) Corro-Chem 100 TC™ Component A

Relevant identified uses of the chemical and restriction on use

The “Relevant” use identified is provided solely to conform to Governmental requirements, and is not included in the manufacturer's published data and specifications. The complete information on identified uses is not available now, and the Safety Data Sheet (“SDS”) will be updated, as it becomes available.

Details of the supplier of the safety data sheet

Manufacturer Gemite Products Inc.
1787 Drew Road, Mississauga, Ontario, L5S 1J5, Canada
Telephone (905) 672-2020
Emergency telephone number 905 672 2020

Other means of identification

Chemical family Sand/cement dry blend based on bituminous coal fly ash. For further information, refer to the product technical data sheet.

Section 2: Hazard(s) identification

2. Hazards identification

GHS Classification: Skin irritation, Category 2 H315: Causes skin irritation.
Serious eye damage, Category 1 H320: Causes serious eye damage.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory System H335: May cause respiratory irritation.

GHS Label element

Hazard pictograms:



Signal Word (GHS-US): Danger

Hazard Statements (GHS-US) H320 - Causes eye irritation
H335 - May cause respiratory irritation
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US): P260 - Do not breathe dust.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, and eye protection.
P305+P351+P338 - **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.

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P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER or doctor/physician.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

362 Take off contaminated clothing and wash before reuse.

Storage:

P403 + P233 Store in a well-ventilated, dry place.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Section 3: Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS No	Concentration
Bituminous coal fly ash	68131 74-8	25%
Quartz (SiO ₂)	14808-60-7	49%
Quartz (SiO ₂), 5 µm	14808-60-7	1%

All other ingredients are non-hazardous within the current knowledge of the supplier and in the concentrations applicable.

Section 4: First-aid measures

Description of First Aid measures

General advice

First aid personnel should pay attention to their own safety. Remove contaminated clothing.

If inhaled

After inhalation of dust. Keep patient calm, remove to fresh air. If difficulties occur: Obtain medical attention.

If on skin

After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed

Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Hazards

No applicable information available. Indication of any immediate medical attention and special treatment needed

Note to physician Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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Section 5: Fire-fighting measures

Extinguishing Media

Suitable Extinguishing Media: No fire hazard present for this material.

Unsuitable Extinguishing Media: No fire hazard present for this material.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: No fire hazard present for this material.

Firefighting Instructions: No fire hazard present for this material.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: None known.

Section 6: Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop spill if safe to do so.

Environmental Precautions

Prevent contamination of drains or waterways and dispose according to local and national regulations.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Utilize a dust suppressant when removing mechanically. Avoid generation of dust during clean-up of spills.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

Section 7: Handling and Storage

Precautions for Safe Handling

Additional Hazards When Processed: Do not breathe dust.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Good housekeeping is needed during storage, transfer, handling, and use of this material to avoid excessive dust accumulation.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from incompatible materials. Store away from oxidizers, combustible materials, and all ignition sources.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s)

Building materials, construction.

Section 8: Exposure controls/personal protection

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government

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Silica, amorphous (7631-86-9)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	20 mppcf (80mg/m ³ /%SiO ₂)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	6 mg/m ³
USA IDLH	US IDLH (mg/m ³)	3000 mg/m ³
Nunavut	OEL TWA (mg/m ³)	2 mg/m ³ (respirable mass) 5 mg/m ³ (total mass)
Northwest Territories	OEL TWA (mg/m ³)	2 mg/m ³ (respirable mass) 5 mg/m ³ (total mass)

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Yukon	OEL TWA (mg/m ³)	300 particle/mL (as measured by Konimeter instrumentation) 20 mppcf (as measured by Impinger instrumentation) 2 mg/m ³ (respirable mass)
Quartz (14808-60-7)		
Mexico	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA OSHA	OSHA PEL (STEL) (mg/m ³)	250 mppcf/%SiO ₂ +5, 10mg/m ³ /%SiO ₂ +2
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ (respirable dust)
USA IDLH	US IDLH (mg/m ³)	50 mg/m ³ (respirable dust)
Alberta	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable particulate)
British Columbia	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable)
Manitoba	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
New Brunswick	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Nova Scotia	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Nunavut	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable mass) 0.3 mg/m ³ (total mass)
Northwest Territories	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable mass) 0.3 mg/m ³ (total mass)
Ontario	OEL TWA (mg/m ³)	0.10 mg/m ³ (designated substances regulation-respirable)
Prince Edward Island	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Quebec	VEMP (mg/m ³)	0.1 mg/m ³ (respirable dust)
Saskatchewan	OEL TWA (mg/rill)	0.05 mg/m ³ (respirable fraction)
Yukon	OEL TWA (mg/m ³)	300 particle/mL
Calcium oxide (1305-78-8)		
Mexico	OEL TWA (mg/m ³)	2 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³
USA IDLH	US IDLH (mg/m ³)	25 mg/m ³
Alberta	OEL TWA (mg/m ³)	2 mg/m ³
British Columbia	OEL TWA (mg/m ³)	2 mg/m ³
Manitoba	OEL TWA (mg/m ³)	2 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	2 mg/m ³

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Newfoundland & Labrador	OEL TWA (mg/m ³)	2 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	2 mg/m ³
Nunavut	OEL STEL (mg/m ³)	4 mg/m ³
Nunavut	OEL TWA (mg/m ³)	2 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	4 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	2 mg/m ³
Ontario	OEL TWA (mg/m ³)	2 mg/m ³
Prince Edward Island	OEL TWA (mg/m ³)	2 mg/m ³
Quebec	VEMP (mg/m ³)	2 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	4 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	2 mg/m ³
Yukon	OEL STEL (mg/m ³)	4 mg/m ³
Yukon	OEL TWA (mg/m ³)	2 mg/m ³
Iron oxide (Fe₂O₃) (1309-37-1)		
Mexico	OEL TWA (mg/m ³)	5 mg/m ³
Mexico	OEL STEL (mg/m ³)	10 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³ (fume) 15 mg/m ³ (total dust)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³ (dust and fume)
USA IDLH	US IDLH (mg/m ³)	2500 mg/m ³ (dust and fume)
Alberta	OEL TWA (mg/m ³)	5 mg/m ³ (respirable)
British Columbia	OEL STEL (mg/m ³)	10 mg/m ³ (fume)
British Columbia	OEL TWA (mg/m ³)	10 mg/m ³ (total particulate matter containing no Asbestos and <1% Crystalline silica-total particulate) 3 mg/m ³ (particulate matter containing no Asbestos and
Manitoba	DEL TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
New Brunswick	OEL TWA (mg/rill)	5 mg/m ³ (particulate matter containing no Asbestos and <1% Crystalline silica, dust and fume) 10 mg/m ³ (regulated under Rouge-particulate matter containing no Asbestos and <1% Crystalline silica)
Newfoundland & Labrador	OEL TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
Nova Scotia	OEL TWA (mg/m ³)	5 mg/m ³ (respirable fraction)

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Nunavut	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass) 10 mg/m ³ (total mass)
Northwest Territories	OEL TWA (mg/rill)	5 mg/m ³ (respirable mass) 10 mg/m ³ (total mass)
Ontario	OEL TWA (mg/m ³)	5 mg/m ³ (respirable)
Prince Edward Island	OEL TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
Quebec	VEMP (mg/m ³)	5 mg/m ³ (dust and fume) 10 mg/m ³ (containing no Asbestos and <1% Crystalline)
Saskatchewan	OEL STEL (mg/m ³)	10 mg/m ³ (dust and fume)
Saskatchewan	OEL TWA (mg/m ³)	5 mg/m ³ (dust and fume)
Yukon	OEL STEL (mg/m ³)	10 mg/m ³ (fume)
Yukon	OEL TWA (mg/m ³)	5 mg/m ³ (fume) 30 mppcf (regulated under Rouge)
Carbon (7440-44-0)		
Mexico	OEL TWA (mg/m ³)	2 mg/m ³ (dust)

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed. *The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

Personal Protective Equipment: Protective goggles or safety glasses with side shields. Gloves. Protective clothing. Dust formation: dust mask.

Materials for Protective Clothing: Wear suitable materials and fabrics.

Hand Protection: Wear protective gloves.

Eye Protection: Goggles or safety glasses with side shields.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use NIOSH-approved dust mask if dust has the potential to become airborne.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Section 9: Physical and chemical properties

Physical State	: Solid
Appearance	: Fine grained, gray powder
Odor	: Odorless*
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available

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Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 2.0 - 3.0
Solubility	Insoluble in water
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not applicable
Volatile organic compounds (VOC) content:	:0 g/l A+B combined

Explosion Data — Sensitivity to Mechanical Impact Not expected to present an explosion hazard due to mechanical impact.

Explosion Data — Sensitivity to Static Discharge : Not expected to present an explosion hazard due to static discharge. * The use of urea or aqueous ammonia injected into the flue gas to reduce nitrogen oxides (NOx) emissions may result in the presence of ammonium sulfate or ammonium bisulfate in the ash at less than 0.1%. When ash containing these substances becomes wet under high pH (>9), free ammonia gas may be released resulting in objectionable/nuisance ammonia odor and potential exposure to ammonia gas especially in confined spaces.

Section 10: Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: The product is chemically stable.

Possibility of hazardous reactions: stable under recommended storage conditions.

Conditions to avoid: no data available

Incompatible materials: no data available

Section 11: Toxicological information

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Causes serious eye damage.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not available. Respirable crystalline silica has been identified as a carcinogen by NTP and IARC.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Repeated exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis.

Symptoms/Injuries After Skin Contact: Repeated or prolonged skin contact may cause irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye damage. Symptoms may include: Redness. Pain. Blurred vision. Severe burns.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

Section 12: Ecological information

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Ot **Toxicity** No additional information available

Silica, amorphous (7631-86-9)	
LC50 Fish 1	5000 mg/I (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/I (Exposure time: 48 h - Species: Ceriodaphnia dubia)
Calcium oxide (1305-78-8)	
LC50 Fish 1	1070 mg/I (Exposure time: 96 h - Species: Cyprinus carpio [static])

Persistence and Degradability Not available

Bioaccumulative Potential

Silica, amorphous (7631-86-9)	
BCF Fish 1	(no bioaccumulation expected)
Calcium oxide (1305-78-8)	
BCF Fish 1	(no bioaccumulation)

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment. Do not empty into drains; dispose of this material and paper bag in a safe way.

Section 13: Disposal considerations

Waste from residues: 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.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14: Transport information

DOT: not dangerous goods
IATA: not dangerous goods
IMDG: not dangerous goods
Special precautions for user: no data available

Section 15: Regulatory information

TSCA list: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
EPCRA: Emergency Planning and Community Right-to-Know
CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.
SARA304 Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.
SARA 311/312 Hazards: Acute Health Hazard
 Chronic Health Hazard: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion

Potential

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
 This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for

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Accidental Release Prevention (40 CFR 68.130, Subpart F).

Clean Water Act: This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

California Prop 65 WARNING! This product contains a chemical known in the State of California to cause cancer.

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Section 16: Other information

HMIS Classification

Health	*	3
Flammability		0
Physical Hazard		0
Personal Protection		X

Caution: HMIS[®] rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS[®] rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS[®] rating is to be used with a fully implemented HMIS[®] program. HMIS[®] is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS[®] attempts to convey full health warning information to all employees.

Notice to reader

The information contained in this Safety Data Sheet is based on our level of knowledge at the time of its preparation. Our most current Sales Terms & Conditions shall apply. Please consult the technical data sheet for the appropriate products, and current guide specifications and application instructions, prior to any use and processing.

The terms of this Safety Data Sheet do not create, or infer, any warranty, express or implied, including by incorporation into, or reference in, any seller's documents or sales agreement.

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Section 1: Identification

Product Identifier (Name) Corro-Chem 100 TC™ Component B

Relevant identified uses of the chemical and restriction on use

The "Relevant" use identified is provided solely to conform to Governmental requirements, and is not included in the manufacturer's published data and specifications. The complete information on identified uses is not available now, and the Safety Data Sheet ("SDS") will be updated, as it becomes available.

Details of the supplier of the safety data sheet

Manufacturer Gemite Products Inc.
1787 Drew Road, Mississauga, Ontario, L5S 1J5, Canada
Telephone (905) 672-2020
Emergency telephone number 905 672 2020
Other means of identification
Chemical family Potassium hydroxide solution

Section 2: Hazard(s) identification

INGREDIENTS	%	CAS NO.
Water	68	7732-18-5
Potassium hydroxide	8	1310-58-3

GHS Classification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Slightly hazardous in case of inhalation (lung sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Potassium hydroxide].

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to upper respiratory tract, skin. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 3: Composition/information on ingredients

Hazardous ingredients

All other ingredients are non-hazardous within the current knowledge of the supplier and in the concentrations applicable.

Section 4: First-aid measures

Description of First Aid measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention immediately. Finish by rinsing thoroughly with running water to avoid a possible infection.

Skin Contact:

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In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. 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.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

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. Seek medical attention.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire-fighting measures

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:

Potentially explosive reaction with bromoform + crown ethers, chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene. Reaction with ammonium hexachloroplatiate(2-) + heat forms heat sensitive explosive product. Potassium hydroxide will cause explosive decomposition of maleic anhydride. Detonation will occur when potassium hydroxide is mixed with n-methyl-nitroso urea and methylene chloride. Nitrogen trichloride explodes on contact with potassium hydroxide.

Section 6: Accidental release measures

Small Spill:

Dilute with water and mop up or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

Large Spill:

Corrosive liquid. Poisonous liquid. 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. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Environmental precautions: Local authorities should be advised if significant spillages cannot be contained.

Section 7: Handling and storage

Precautions:

Keep locked up. Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. 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 acids.

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Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

Section 8: Exposure controls/personal protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:

Splash goggles. 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.

Exposure Limits:

Potassium hydroxide CEIL: 2 from ACGIH (TLV) [United States] [1999] Consult local authorities for acceptable exposure limits.

Section 9: Physical and chemical properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Alkaline. (Strong.)

Molecular Weight: Not applicable.

Color: Clear .

pH (1% soln/water): Basic.

Boiling Point: The lowest known value is 100°C (212°F) (Water).

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Weighted average: 1.11 (Water = 1)

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Vapor Density: The highest known value is 0.62 (Air = 1) (Water).

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:

Easily soluble in cold water, hot water. Insoluble in diethyl ether.

Section 10: Stability and reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible Materials

Incompatibility with various substances:

Reactive with acids. Slightly reactive to reactive with organic materials, metals.

Corrosivity:

Highly corrosive in presence of aluminum, zinc, and brass. Slightly corrosive in presence of copper, of stainless steel

Non-corrosive in presence of glass, of stainless steel.

Special Remarks on Reactivity:

Hygroscopic (absorbs moisture from air). When dissolved in water or alcohol or when the solution is treated with acid, much heat is generated. Reacts violently with acids, halogens, halogenated hydrocarbons, maleic anhydride, organic anhydrides, isocyanates, alkylene oxides, epichlorhydrin, aldehydes, alcohols, glycols, phenols, cresols, caprolactum solution. Also incompatible with nitro compounds (nitrobenzene, nitromethane, nitrogen trichloride), organic materials, acid anhydrides, acid chlorides, magnesium, peroxidized tetrahydrofuran, chlorine dioxide, maleic dicarbide, sugars. When wet attacks metals such as aluminum, tin, lead, and zinc. (Potassium hydroxide)

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Special Remarks on Corrosivity:

When wet, attacks metals such as aluminum, tin, lead, and zinc, producing flammable hydrogen gas. (Potassium hydroxide)

Polymerization: Will not occur.

Section 11: Toxicological information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact.

Toxicity to Animals: Acute oral toxicity (LD50): 1365 mg/kg (Rat) (Calculated value for the mixture).

Chronic Effects on Humans:

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Potassium hydroxide]. Contains material which may cause damage to the following organs: upper respiratory tract, skin.

Other Toxic Effects on Humans:

Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (irritant), of ingestion, hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May affect genetic material based on animal data. (Potassium hydroxide)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Acute Potential Health Effects: Skin: Causes skin irritation and burns. Eyes: Causes eye irritation and burns. May cause irreversible eye injury. Inhalation: Causes irritation and of the respiratory tract and mucous membranes. Irritation may lead to chemical pneumonitis Ingestion: Harmful if swallowed. Causes irritation and burns of the gastrointestinal (digestive) tract with abdominal pain, vomiting and possible death. Chronic Potential Health Effects: Chronic contact with dilute solutions of potassium hydroxide can cause dermatitis. Inhalation can produce chronic productive cough, and shortness of breath.

Section 12: Ecological information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short-term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste from residues: 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.

Section 14: Transport information

DOT Classification: Class 8: Corrosive material

Identification: Potassium hydroxide, solution (Potassium hydroxide) UNNA: 1814 PG: II

Special Provisions for Transport: Not available.

Section 15: Regulatory information

Federal and State Regulations:

New York release reporting list: Potassium hydroxide Pennsylvania RTK: Potassium hydroxide Florida: Potassium hydroxide Minnesota: Potassium hydroxide Massachusetts RTK: Potassium hydroxide New Jersey: Potassium hydroxide TSCA 8(b)

inventory: Potassium hydroxide; Water CERCLA: Hazardous substances.: Potassium hydroxide: 1000 lbs. (453.6 kg);

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects

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(TOXIC). CLASS E: Corrosive liquid.

DSCL (EEC):R25- Toxic if swallowed. R35- Causes severe burns. S1/2- Keep locked up and out of the reach of children. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37- Wear suitable protective clothing and gloves. S39- Wear eye/face protection. S45- In case of accident or if you feel unwell,

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Specific hazard:

Protective Equipment:

Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Section 16: Other information

HMIS Classification

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

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