

SAFETY DATA SHEET – CRACK FLUSHING AGENT

SECTION 1. IDENTIFICATION

Product Identifier	Crack Flushing Agent
Other Means of Identification	Cleaning solution, acid
Recommended Use	Industrial use, professional use only
Restrictions on Use	None known
Supplier Identifier	Multiurethanes Ltd. 5245 Creekbank Rd, Mississauga, ON L4W 1N3
Emergency Telephone Number	1-800-663-6633 24hr Service - 613-996-6666 (CANUTEC)

SECTION 2. HAZARD IDENTIFICATION

Classification	Corrosive to Metals - Category 1 Skin Corrosion/Irritation - Category 1 Eye Damage/Irritation - Category 1
	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Label Elements
Hazard Pictogram



<u>Signal Word</u>	Danger
<u>Hazard Statements</u>	Causes severe skin burns and eye damage. May be corrosive to metals.

Precautionary Statements Wear appropriate protective equipment.
Avoid breathing fume/mist/vapours.
Wash hands and exposed skin after handling.
IF ON SKIN: Wash with soap and water.
Seek medical attention.
IF IN EYES: Rinse with water. Seek medical attention.
IF INHALED: Remove person to fresh air.
Seek medical attention.

Other Hazards Contact with most metals will generate flammable hydrogen gas. Contact with water gives off heat. Burning produces obnoxious and toxic fumes. Chronic skin contact with low concentrations may cause dermatitis. May cause respiratory tract irritation.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common Names / Synonyms
Phosphoric Acid	7664-38-2	75-85%	Orthophosphoric acid, Hydrogen Phosphate

Notes Mixture containing acids.

SECTION 4. FIRST-AID MEASURES

Inhalation Immediately remove person to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention.

Skin Contact Wear appropriate protective equipment. Immediately remove all contaminated clothing. Immediately flush skin with gently flowing, running water for at least 20 minutes. Do not rub area of contact. Seek immediate medical attention. Wash contaminated clothing before reuse. Contaminated leather may require disposal.

Eye Contact Immediately flush eyes with running water for at least 20 minutes. If contact lens is present, do not delay flushing or attempt to remove the lens until flushing is done. Seek immediate medical attention.

Ingestion Rinse mouth. Do not induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head positioned between legs to avoid breathing in of vomit, rinse mouth and have victim drink one to two glasses of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Most Important Symptoms and Effects (Acute or Delayed) Causes severe skin irritation. Symptoms may include redness, blistering, pain and swelling. Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage. May cause respiratory irritation. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may cause severe burns to the mucous membranes of the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations and bleeding.

Immediate Medical Attention and Special Treatment Immediate medical attention is required. Causes chemical burns. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical. May react with water. Use water spray with caution.

Unsuitable Extinguishing Media Use water spray with caution. Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Product Not considered flammable. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Special Protective Equipment and Precautions for Firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Use water to cool fire-exposed containers. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to section 8 for additional information on acceptable personal protective equipment. Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods for Containment and Cleaning Up

Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Dike for water control. Dilute alkali with water and neutralize with acids (e.g. acetic acid/vinegar). Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (refer to section 13). Notify the appropriate authorities as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear protective gloves/clothing and eye/face protection. Use only in well-ventilated areas. Refer to section 8 for additional information on acceptable personal protective equipment. Do not breathe fumes, mists or vapours. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from heat, flame

and from incompatibles. May react with water, generating heat. When diluting, always add the product to water; never add water to the product. When mixing with water, stir small amounts in slowly. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for Safe Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Do not freeze. Store in corrosion-resistant containers. Avoid contact with aluminum. Water; Metals (e.g. tin, aluminum, zinc and alloys containing these metals) Strong oxidizers (e.g. Chlorine, Peroxides, etc.), acids (e.g. sulfuric acid, nitric acid), caustics. Amines Alcohols

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

ACGIH TLV – TWA = 1 mg/m³, STEL = 3 mg/m³
OSHA PEL – PEL = 1 mg/m³, STEL = not available

Appropriate Engineering Controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ensure all national/local regulations are observed.

Individual Protection Measures

Respiratory protection is required if the concentrations exceed exposure. NIOSH-approved respirators are recommended. A self-contained breathing apparatus should be used in emergency situations or instances where exposure levels are not known. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Impervious gloves must be worn when using this product. Wear as appropriate: Neoprene; Polyvinylchloride; Viton; Butyl rubber; Nitrile rubber; Polyethylene. Unsuitable material: polyvinyl alcohol. Wear chemically protective gloves

(impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear colourless liquid
Odour	None
Odour Threshold	Not applicable
pH	< 1.0 (1% solution = 2.1)
Melting Point/Freezing Point	-17.5°C (0.5°F)
Initial Boiling Point/Boiling Range	135°C (275°F)
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammable/Explosive Limit	Not applicable
Vapour Pressure	5.63
Vapour Density	3.5
Relative Density	1.573
Solubility in Water	Very soluble

Solubility in Other Liquids	Not available
Partition Coefficient, n-Octanol / Water	Not applicable
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	18 cSt @ 20°C (68°F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Not normally reactive. May be corrosive to metals. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat.
Chemical Stability	Stable under recommended handling and storage conditions (refer to section 7).
Possibility of Hazardous Reactions	Hazardous polymerization does not occur.
Conditions to Avoid	Avoid heat and open flame. Keep away from incompatibles. Keep container tightly closed when not in use. Avoid contact with water.
Incompatible Materials	Water, metals (e.g. tin, aluminum, zinc and alloys containing these metals), strong oxidizers (e.g. chlorine, peroxides, etc.), acids (e.g. sulfuric acid, nitric acid), caustics. Amines alcohols
Hazardous Decomposition Products	May produce oxides of phosphorus and phosphoric anhydride.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
LD50 and LC50 Data	Oral LD50, rat = 4,400 mg/kg Dermal LD50, rabbit = > 3,160 mg/kg Inhalation LC50 = not available
Skin Corrosion/Irritation	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Skin Irritation - Category 1 Causes severe skin burns and eye damage.
Serious Eye Damage/Irritation	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Eye Damage/Irritation - Category 1 Causes serious eye damage.
Respiratory or Skin Sensitization	Not expected to be a skin or respiratory sensitizer.
Germ Cell Mutagenicity	Not expected to be mutagenic in humans.
Teratogenicity	Not available
Carcinogenicity	No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Specific Target Organ Toxicity (Single Exposure)	The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific Target Organ Toxicity (Repeated Exposure)	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Reproductive Toxicity	Not expected to have other reproductive effects.
Aspiration Hazard	May cause severe irritation to the nose, throat and respiratory tract. May cause severe irritation and corrosive damage in the mouth, throat and stomach.
Symptoms/Injuries After Inhalation	Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
Symptoms/Injuries After Skin Contact	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Skin Irritation - Category 1 Causes severe skin burns and eye damage.
Symptoms/Injuries After Eye Contact	This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Eye Damage/Irritation - Category 1 Causes serious eye damage.
Symptoms/Injuries After Ingestion	Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
Chronic Symptoms	Chronic skin contact with low concentrations may cause dermatitis.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Toxicity is primarily associated with pH.
Persistence and Degradability	The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	Not available

Mobility in Soil Not available

Other Adverse Effects Not available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of material in accordance with all applicable federal, state/provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	UN Proper Shipping Name	Transport Hazard Class	Packing Group
TDG	UN1805	PHOSPHORIC ACID SOLUTION	8	III
49CFR/DOT	UN1805	PHOSPHORIC ACID, LIQUID	8	III

Special Precautions Not applicable

Environmental Hazards Refer to section 12.

Transport in Bulk May be shipped as LIMITED QUANTITY. Please refer to transportation of dangerous goods guidelines for your area.

SECTION 15. REGULATORY INFORMATION

OHSA Status Hazardous; irritant; corrosive

TSCA Status Components are listed on TSCA Inventory.

CERCLA Reportable Quantity Not applicable for typical product application.

SARA Title III Section 302	Extremely hazardous substances - no known reportable constituents.
SARA Title III Section 311/312	Hazard categories – acute health hazard; chronic health hazard.
SARA Title III Section 313	Toxic Chemical Release Reporting - not applicable.
RCRA Status	It is the responsibility of the product user to determine, at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.
WHMIS Rating	Class E - Corrosive Material
NAERG Rating	154

SECTION 16. OTHER INFORMATION

Date of Latest Revision May 15, 2017