

SAFETY DATA SHEET (SDS) / EF (EFFLORESCENCE CLEANER)

Section 1 Product / Company Identification

Product Name	EF
Product Description	Efflorescence Cleaner
Manufacturer & Address	DYNA Metro Inc. 37 Creditstone Road Concord, Ontario L4K 1N3 Canada
Manufacturer's Phone Number	+1 905.761.3309
Manufacturer's Facsimile	+1 905.761.2114
Date Of Issue	June 5, 2018
Prepared By	Mark Gagro
Emergency Phone Numbers	Canutech 1-613-996-6666 (Canada) Chemtrec 1-800-424-9300 (U.S.)

Section 2 Emergency And First Aid

Emergency Information	DYNA EF Efflorescence Cleaner may cause respiratory tract, eyes and skin irritation. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Eyes	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin	In the event 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 immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
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.

Section 3 Composition Information

Description	Concrete Cleaner		
	Phosphoric Acid		CAS # 7664-38-2
	Water		CAS # 7732-18-5
	Formula	Nonionic primary alcohol alkoxylate	CAS # 37251-67-5
	Formula	Phosphate ester of alcohol ethoxylate	CAS # 68585-36-4

Section 4 Hazardous Ingredients

<u>COMPONENT</u>	<u>CAS #</u>	<u>OSHA PEL</u>	<u>ACGIH TLV-TWA</u>	<u>NIOSH REL</u>
Phosphric Acid	7664-38-2	10 - 30 %		Oral LD50 (rat) = 1530 mg/kg Dermal LD50 (rabbit) = 2740 mg/kg Dust (rat) = 850 mg / m ³ 1 hour
Water	7732-18-5	50 - 70 %		Not available
Formula		0.5 - 2 %		Not available

Section 5 Hazardous Identification

Potential Health Effects

NOTE: Potential health effects may vary depending upon the duration and degree of exposure. To reduce or eliminate health hazards associated with this product, use exposure controls or personal protection methods as described in Section 12.

Eye Contact

(Acute/Chronic) Exposure to airborne dust may cause immediate or delayed irritation or inflammation of the cornea. Eye contact by larger amounts of dry powder or splashes of wet product may cause effects ranging from moderate eye irritation to chemical burns and blindness.

Skin Contact

(Acute) Exposure to dry product may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure.

(Chronic) Dry Product coming in contact with wet skin or exposure to wet Product may cause more severe skin effects, including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of chemical (caustic) burns.

(Acute/Chronic) Some individuals may exhibit an allergic response upon exposure to the Product. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers.

Inhalation

(Acute) Exposure to the Product may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system. Pre-existing upper respiratory and lung diseases may be aggravated by inhalation.

(Chronic) Inhalation exposure to free crystalline silica may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease, and/or cause or aggravate other lung diseases or conditions.

Ingestion

(Acute/Chronic) Internal discomfort or ill effects are possible if large quantities are swallowed.

Carcinogenic Potential

The Product is not recognized as a carcinogen by NTP, OSHA, or IARC. However, it may contain trace amounts of heavy metals recognized as carcinogens by these organizations. In addition, it also contains crystalline silica which IARC classifies as a known human carcinogen (Group I). The NTP, in its ninth Annual Report on Carcinogens, classified "silica, crystalline (respirable)" as a known carcinogen. (See also Sections 4 and 12.)

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 sodium carbonate.
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 sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7 Chemical And Physical Data

APPEARANCE/ODOR:	Odorless	PHYSICAL STATE:	Liquid
BOILING POINT:	158°C	MELTING POINT:	21°C
VAPOR PRESSURE:	0.3 kPa (@ 20°C)	VAPOR DENSITY:	3.4 (air = 1)
VOLATILITY:	Not available	ODOR THRESHOLD:	Not available
WATER/OIL DIST. COEFF.:	Not available	IONICITY (IN WATER):	Not available
SPECIFIC GRAVITY (H ₂ O = 1.0):	1.1	DISPERSION PROPERTIES:	Not available
SOLUBILITY:	Easily soluble in hot water. Soluble in cold water.		

Section 8 Fire And Explosion

FLASH POINT:	Not applicable	LOWER EXPLOSIVE LIMIT:	None
AUTO IGNITION TEMPERATURE:	Not applicable	UPPER EXPLOSIVE LIMIT:	None
FLAMMABLE LIMITS:	Not applicable	SPECIAL FIRE FIGHTING PROCEDURES:	None
EXTINGUISHING MEDIA:	Not combustible	UNUSUAL FIRE AND EXPLOSION HAZARDS:	None
HAZARDOUS COMBUSTION PRODUCTS:	None		

SPECIAL REMARKS ON FIRE HAZARDS: Reacts with metals to liberate flammable hydrogen gas. Formation of flammable gases with aldehydes, cyanides, mercaptans, and sulfides.

SPECIAL REMARKS ON EXPLOSION HAZARDS: Mixtures with nitromethane are explosive. (Phosphoric Acid)

Section 9 Stability And Reactivity Data

STABILITY:	Product is stable.
INSTABILITY TEMPERATURE:	Not available.
CONDITIONS OF INSTABILITY:	Incompatible Materials
INCOMPATIBILITY:	Reactive with oxidizing agents, combustible materials, metals, alkalis.
CORROSIVITY:	Extremely corrosive in presence of copper, of stainless steel(304), of stainless steel(316). Highly corrosive in presence of aluminum. Non-corrosive in presence of glass.

SPECIAL REMARKS ON REACTIVITY: Reacts with metals to liberate flammable hydrogen gas. Incompatible with sodium tetrahydroborate producing a violent exothermic reaction. Heat generated with: alcohols, glycols, aldehydes, amides, amines, azo-compounds, carbamates, caustics, esters, ketones, phenols and cresols, organophosphates, epoxides, combustible materials, unsaturated halides, organic peroxides. Formation of flammable gases, with aldehydes, cyanides, mercaptans, and sulfides. Formation of toxic fumes with cyanides, fluorides, halogenated organics, sulfides, and organic peroxides. Do not mix with solutions containing bleach or ammonia. Incompatible with nitromethane, chlorides + stainless steel. (Phosphoric Acid)

SPECIAL REMARKS ON CORROSIVITY:	Minor corrosive effect on bronze. Severe corrosive effect on brass. Corrosive to ferrous metals and alloys.
POLYMERIZATION:	Will not occur.

Section 10 Precautions For Handling And Storage

HANDLING AND STORAGE:	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 oxidizing agents, combustible materials, metals, alkalis. May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package.
SPILLS:	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 sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 11 Toxicological Information

Routes of Entry:	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Chronic Effects on Humans:	May cause damage to the following organs: blood, liver, skin, eyes, bone marrow.
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:	Not available.

Acute Potential Health Effects:

Skin: Corrosive and causes severe skin irritation and can cause severe skin burns. May affect behavior (somnolence or excitement) if absorbed through skin. Eyes: Corrosive. Liquid or vapor causes severe eye irritation and can cause severe eye burns leading to permanent corneal damage or chemical conjunctivitis.

Ingestion: May be harmful if swallowed. Causes irritation and burns of the gastrointestinal (digestive) tract. Causes severe pain, nausea, vomiting, diarrhea hematemesis, gastrointestinal hemorrhaging, and shock. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. May affect behavior and urinary system, liver (hepatocellular damage, hepatic enzymes increased), blood (blood dyscrasia).

Section 12 Personal Protection / Exposure Control

RESPIRATORY PROTECTION:	Use local exhaust or general dilution ventilation to control dust levels below applicable exposure limits. Minimize dispersal of dust into the air. If local or general ventilation is not adequate to control dust levels below applicable exposure limits or when dust causes irritation or discomfort, use MSHA/NIOSH approved respirators.
EYE PROTECTION:	Wear safety glasses with side shields or goggles to avoid contact with the eyes. In extremely dusty environments and unpredictable environments, wear tight-fitting unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when handling cement or cement containing products.
SKIN PROTECTION:	Wear impervious abrasion- and alkali-resistant gloves, boots, long-sleeved shirt, long pants or other protective clothing to prevent skin contact. Promptly remove clothing dusty with dry Product or clothing dampened with moisture mixed with the Product, and launder before re-use. If contact occurs, wash areas contacted by material with pH neutral soap and water.

Section 13 Personal Protection / Exposure Control

DISPOSAL:

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/ Provincial and local laws and regulations of unusable or contaminated materials. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Dispose of packaging/containers according to local, state and federal regulations.

IF THIS MATERIAL AS PACKAGED, BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA FOR A HAZARDOUS WASTE AS DEFINED BY THE ENVIRONMENTAL PROTECTION AGENCY UNDER THE AUTHORITY OF THE RESOURCE CONSERVATION AND RECOVER ACT (40CFR 261), DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

Section 14 Transportation Data

DOT Classification: Class 8: Corrosive material

Identification: Phosphoric acid (Phosphoric Acid) UNNA: 1805 PG: III

Special Provisions for Transport: Not available.

Section 15 Other Regulatory Information

Status under US OSHA Hazard Communication Rule 29 CFR 1910.1200:

The Product is considered a hazardous chemical under this regulation and should be included in the employer's hazard communication program.

WHMIS (Canada):

CLASS E: Corrosive liquid

DSCL (EEC):

R34- Causes burns. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Status under TSCA (as of May 1997):

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.):

Health Hazard: 3p. 6

Fire Hazard: 0

Reactivity: 0

Personal Protection:

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

Health: 3

Flammability: 0

Reactivity: 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. Face shield.

Section 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, express or implied, is made with respect to the information contained herein. It is the user's obligation to determine the conditions of safe use of this product.