Material Safety Data Sheet

BRAWN

Section 1. Chemical product and company identification

Trade name : BRAWN
Product use : Delimer
Supplier : Ecolab Co.
5105 Tomken Road
Mississauga ON L4W 2X5
1-800-352-5326
Code : 999180
Date of issue **03-October-2008**

EMERGENCY HEALTH INFORMATION: 1-800-328-0026
Outside United States and Canada CALL 1-651-222-5352 (in USA)

Section 2. Composition, information on ingredients

Name	CAS number	% by weight
phosphoric acid	7664-38-2	15 - 40
nitric acid	7697-37-2	7 - 13

Section 3. Hazards identification

Physical state : Liquid. [Liquid.]
Emergency overview : DANGER!

CAUSES RESPIRATORY TRACT, DIGESTIVE TRACT, EYE AND SKIN BURNS.

Do not ingest. Do not get in eyes, on skin or on clothing. Do not breathe vapour or spray. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling.

Routes of entry : Skin contact, Eye contact, Inhalation, Ingestion

Potential acute health effects

Eyes : Corrosive to eyes.
Skin : Corrosive to the skin.
Inhalation : Corrosive to the respiratory system.
Ingestion : Causes burns to mouth, throat and stomach.

See toxicological information (section 11)

Section 4. First-aid measures

Eye contact : In case of contact, immediately flush eyes with cool running water. Remove contact lenses and continue flushing with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : If inhaled, remove to fresh air. If exposed person is not breathing, give artificial respiration or oxygen applied by trained personnel. Get medical attention immediately.

Ingestion : If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire-fighting measures

Auto-ignition temperature : Not available.

Flash point : > 100°C

Flammable limits : Not available.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.
Dyke area of fire to prevent runoff.

In a fire or if heated, a pressure increase will occur and the container may burst.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Risk of explosion of the product in the presence of mechanical impact: Not available.

Risk of explosion of the product in the presence of static discharge: Not available.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Stop leak if without risk. Use suitable protective equipment. Keep unnecessary personnel away. Do not touch or walk through spilt material.

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : If emergency personnel are unavailable, contain spilt material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dyke spilt material or otherwise contain it to ensure runoff does not reach a waterway. Place spilt material in an appropriate container for disposal.

Section 7. Handling and storage

Handling : Do not ingest. Do not get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapour or mist. Wash thoroughly after handling. Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Storage : Keep out of reach of children. Keep container in a cool, well-ventilated area. Keep container tightly closed.
Store between the following temperatures: 10 and 50°C

Section 8. Exposure controls/personal protection

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Personal protection :

Eyes : Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

Hands : Use chemical-resistant, impervious gloves.

Skin : Use synthetic apron, other protective equipment as necessary to prevent skin contact.

Respiratory : Wear appropriate respirator when ventilation is inadequate and occupational exposure limits are exceeded.

Name	Exposure limits

phosphoric acid

CA Alberta Provincial (Canada, 10/2006).
8 hrs OEL: 1 mg/m³ 8 hour(s).
15 min OEL: 3 mg/m³ 15 minute(s).
CA British Columbia Provincial (Canada, 7/2007).
STEL: 3 mg/m³ 15 minute(s).
TWA: 1 mg/m³ 8 hour(s).
CA Ontario Provincial (Canada, 3/2007).
STEV: 3 mg/m³ 15 minute(s).
TWAEV: 1 mg/m³ 8 hour(s).
CA Quebec Provincial (Canada, 12/2006).
STEV: 3 mg/m³ 15 minute(s).
TWAEV: 1 mg/m³ 8 hour(s).

ACGIH TLV (United States, 1/2008).
STEL: 3 mg/m³ 15 minute(s).
TWA: 1 mg/m³ 8 hour(s).

nitric acid

CA Alberta Provincial (Canada, 10/2006).
15 min OEL: 10 mg/m³ 15 minute(s).
15 min OEL: 4 ppm 15 minute(s).
8 hrs OEL: 5.2 mg/m³ 8 hour(s).
8 hrs OEL: 2 ppm 8 hour(s).
CA British Columbia Provincial (Canada, 7/2007).
STEL: 4 ppm 15 minute(s).
TWA: 2 ppm 8 hour(s).
CA Ontario Provincial (Canada, 3/2007).
STEV: 10 mg/m³ 15 minute(s).
STEV: 4 ppm 15 minute(s).
TWAEV: 5 mg/m³ 8 hour(s).
TWAEV: 2 ppm 8 hour(s).
CA Quebec Provincial (Canada, 12/2006).
STEV: 10 mg/m³ 15 minute(s).
STEV: 4 ppm 15 minute(s).
TWAEV: 5.2 mg/m³ 8 hour(s).
TWAEV: 2 ppm 8 hour(s).

ACGIH TLV (United States, 1/2008).
STEL: 10 mg/m³ 15 minute(s).
STEL: 4 ppm 15 minute(s).
TWA: 5.2 mg/m³ 8 hour(s).
TWA: 2 ppm 8 hour(s).

Section 9. Physical and chemical properties

Physical state : Liquid. [Liquid.]
Colour : Blue. [Light]
Odour : Acetic acid.
pH : 1 [Conc. (% w/w): 100%]
Boiling/condensation point : 100°C (212°F)
Melting/freezing point : Not available.
Relative density : 1.229
Vapour pressure : Not available.
Vapour density : Not available.
Odour threshold : Not available.
Evaporation rate : Not available.
$LogK_{ow}$: Not available.

Section 10. Stability and reactivity

Stability : The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur.

Conditions of instability : Not available.

Reactivity : Highly reactive or incompatible with the following materials: alkalis.
Slightly reactive or incompatible with the following materials: metals.
Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not occur.

Section 11. Toxicological information

Potential acute health effects

Eyes : Corrosive to eyes.

Skin : Corrosive to the skin.

Inhalation : Corrosive to the respiratory system.

Ingestion : Causes burns to mouth, throat and stomach.

Potential chronic health effects

Carcinogenic effects : No known significant effects or critical hazards.

Ingredient name	ACGIH	IARC	NTP	OSHA
Not applicable.				

Mutagenic effects : No known significant effects or critical hazards.

Teratogenic effects : No known significant effects or critical hazards.

Reproductive effects : No known significant effects or critical hazards.

Sensitization to Product : No known significant effects or critical hazards.

Synergistic products (toxicologically) : Not available.

Toxicity data

Ingredient name	Test	Route	Result	Species
phosphoric acid	LD50	Dermal	2740 mg/kg	Rabbit
	LD50	Oral	1.25 gm/kg	Mouse
	LD50	Oral	1.25 gm/kg	Rat
	LD50	Oral	1530 mg/kg	Rat
	LC50	Inhalation	>850 mg/m3	Rat
nitric acid	LDLo	Oral	430 mg/kg	Human

Target organs : Contains material which may cause damage to the following organs: lungs, mucous membranes, upper respiratory tract, teeth.

Section 12. Ecological information

Ecotoxicity

Ingredient name	Species	Period
Not available.		

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. 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.

Consult your local or regional authorities.

Section 14. Transport information

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

UN Classification

UN number	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S. (phosphoric acid, nitric acid)
Class	8
Packing group	II

See shipping documents for specific transportation information.

Section 15. Regulatory information

WHMIS : Class E: Corrosive material

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

Section 16. Other information

Date of issue : **03-October-2008.**

Responsible name : **Regulatory Affairs**
1-800-352-5326

Date of previous issue : **03-October-2005.**

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.