

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **DGP Drain Treatment**

Product Code(s)

: 7239\0005

Recommended use of the chemical and restrictions on use

: Reagent; Chemical intermediate.
Recommended restrictions None known.

Chemical family

: Alkaline mixture.

Name, address, and telephone number of the supplier:

Name, address, and telephone number of the manufacturer:

Brodi Specialty Products Ltd.

Refer to supplier

3175 14th Avenue Unit 1,
Markham ON, Canada
L3R 0H1

Supplier's Telephone # : (905)-475-6084

24 Hr. Emergency Tel # : (613) 996-6666 (CANUTEC)

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Odorless.

Most important hazards: 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).

Hazard classification:

Corrosive to metals - Category 1

Acute toxicity, Oral - Category 4

Skin corrosion/irritation - Category 1B

Eye damage/irritation - Category 1

Specific target organ toxicity, single exposure - Category 3 (Respiratory irritation)

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

H290: May be corrosive to metals.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H335: May cause respiratory irritation.

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Precautionary statement(s)

P260: Do not breathe mist.
 P271: Use only outdoors or in a well-ventilated area.
 P280: Wear protective gloves/clothing and eye/face protection.
 P270: Do not eat, drink or smoke when using this product.
 P264: Wash hands and face thoroughly after handling.
 P234: Keep only in original packaging.

P304 + P340: If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P363: Wash contaminated clothing before reuse.
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P301 + P330 + P331: If swallowed: Rinse mouth. Do NOT induce vomiting.
 P310: Immediately call a POISON CENTER or doctor/physician.
 P390: Absorb spillage to prevent material damage.

P406: Store in corrosive resistant container with a resistant inner liner.
 P405: Store locked up.
 P403: Store in a well-ventilated place.
 P233: Keep container tightly closed.

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

Other hazards

Other hazards which do not result in classification:

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Ecological information:

Avoid release to the environment. See Section 12 for more environmental information.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Solution

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
potassium hydroxide	Potassium hydrate	1310-58-3	45.00
Sodium chloride	Salt	7647-14-5	<1%

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Obtain medical attention immediately.

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

Skin contact : Wear appropriate protective equipment. Remove/Take off immediately all contaminated clothing. Immediately flush skin with gently flowing, running water for at least 20 minutes. Do not rub area of contact. Obtain medical attention immediately. Wash contaminated clothing before reuse.

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Eye contact : Wear appropriate protective equipment. Protect unharmed eye. If in contact with eyes, 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. Obtain medical attention immediately.

Most important symptoms and effects, both acute and delayed

: Harmful if swallowed. Ingestion may cause severe burns to the mucous membranes of the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations and bleeding. Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage. Chemical burns, corneal damage, and possibly blindness can result from direct contact. Causes skin burns. Symptoms may include redness, blistering, pain and swelling. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. May cause respiratory irritation. May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes chemical burns. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media*Suitable extinguishing media*

: Alcohol resistant foam
Use water with caution.
Contact with water will generate considerable heat.
Carbon dioxide (CO₂)
Dry chemical powder.

Unsuitable extinguishing media

: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not flammable.
Burning produces obnoxious and toxic fumes.
Contact with most metals will generate flammable hydrogen gas.
Contact with water will generate considerable heat.

Flammability classification (OSHA 29 CFR 1910.106)

: Not flammable.

Hazardous combustion products

: Potassium oxides

Special protective equipment and precautions for firefighters*Protective equipment for fire-fighters*

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Chemical protective clothing (e.g. chemical splash suit) and positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

Special fire-fighting procedures

: Do not breathe mists, vapours or sprays.
Move containers from fire area if safe to do so.
Cool closed containers exposed to fire with water spray.
Do not allow run-off from fire fighting to enter drains or water courses.
Dike for water control.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Do not touch or walk through spilled material. 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 protective measures listed in sections 7 and 8.

- Environmental precautions** : Do not allow material to contaminate ground water system. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Place in clean, dry and labeled containers. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
EPA/CERCLA Reportable quantity (RQ): Potassium hydroxide (1000 lbs / 454 kg)

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. In case of inadequate ventilation wear respiratory protection. Keep away from extreme heat and flame. Do not breathe mists, vapours or sprays. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Keep only in original container. Keep away from incompatibles. Keep containers closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. When diluting, always add the product to water. Never add water to the product. During preparation or dilution, always add liquid slowly to water and with constant stirring.

- Conditions for safe storage** : Store in corrosive resistant container with a resistant inner liner. Store in a well-ventilated place. Store locked up. Keep container tightly closed. Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Store away from incompatible materials. Store between 15-48.8°C (60-120°F). Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. No smoking. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

- Incompatible materials** : Acids ; Organic materials; Metals (e.g. Aluminum, brass, copper); Water; phosphorus

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>			
<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u> <u>STEL</u>
potassium hydroxide	2 mg/m ³ (Ceiling)	N/Av	2 mg/m ³ (Ceiling) (final rule limit) N/Av

Sodium chloride	N/Av	N/Av	N/Av	N/Av
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Exposure controls

Ventilation and engineering measures

- : Use only in well-ventilated areas. Use corrosion-resistant ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

- : If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. 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. Advice should be sought from respiratory protection specialists.

Skin protection

- : Wear protective gloves/clothing. Impervious gloves must be worn when using this product. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear impervious clothing to prevent skin contact. Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact.

Eye / face protection

- : Wear eye/face protection. Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.

Other protective equipment

- : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

- : Do not breathe mists, vapours or sprays. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after using this product, and before eating, drinking or smoking. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Water white liquid.
- Odour** : Odourless.

- Odour threshold** : N/Av
- pH** : >14
- Melting/Freezing point** : N/Av

Initial boiling point and boiling range

- : N/Av

- Flash point** : N/Av
- Flashpoint (Method)** : N/Av

- Evaporation rate (BuAe = 1)** : >Water

- Flammability (solid, gas)** : Not applicable.
- Lower flammable limit (% by vol.)** : Not applicable.

- Upper flammable limit (% by vol.)** : Not applicable.

- Oxidizing properties** : None known.

- Explosive properties** : Not explosive
- Vapour pressure** : **Vapour density**

: 2 mmHg @ 20°C : Not available.

Relative density / Specific gravity

: 1.450

Solubility in water : Soluble

: Soluble

Other solubility(ies) : N/Av

: N/Av

SAFETY DATA SHEET**Partition coefficient: n-octanol/water or Coefficient of water/oil distribution**

: Not applicable.
Auto-ignition temperature : Not applicable.

Decomposition temperature : N/Av
Viscosity : N/Av
Volatiles (% by weight) : 50%

Volatile organic Compounds (VOC's)
: N/Av

Absolute pressure of container

: N/Av
Flame projection length : N/Av

Other physical/chemical comments
: No additional information.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive. Corrosive in contact with metals Contact with most metals will generate flammable hydrogen gas. May react with water, generating heat. Product may absorb Carbon dioxide from the air to form Potassium carbonate.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: None expected, when used as intended. Hazardous polymerization does not occur.
Conditions to avoid : Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.

Incompatible materials : See Section 7 (Handling and Storage) for further details.

Hazardous decomposition products
: See Section 5 (Fire Fighting Measures).

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure:**

Routes of entry inhalation : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES

Routes of exposure skin absorption
: YES

Potential Health Effects:**Signs and symptoms of short-term (acute) exposure***Sign and symptoms Inhalation*

:

Sign and symptoms ingestion

May cause respiratory

irritation. May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

- : Harmful if swallowed. Ingestion may cause severe burns to the mucous membranes of the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations and bleeding.

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Sign and symptoms skin : Causes skin burns. Symptoms may include redness, blistering, pain and swelling. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring.

Sign and symptoms eyes : Causes serious eye damage. Symptoms may include severe pain, blurred vision, redness and corrosive damage. Chemical burns, corneal damage, and possibly blindness can result from direct contact.

Potential Chronic Health Effects

: Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Mutagenicity : Not expected to be mutagenic in humans.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: Not expected to cause reproductive effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : Target Organs: Eyes, skin, respiratory system and digestive system.

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: Specific target organ toxicity, single exposure - Category 3
May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : No information available.

Toxicological data : There is no data available for this product. The calculated ATE values for this mixture are:
ATE oral = 455 mg/kg
ATE dermal = 2800.00 mg/kg

<u>Chemical name</u>	LC₅₀(4hr) <u>inh. rat</u>	LD₅₀	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
potassium hydroxide	N/Av	205 mg/kg	> 1260 mg/kg
Sodium chloride	10500 mg/m ³	3000 mg/kg	>10000mg/kg

Other important toxicological hazards

: None reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Toxicity is primarily associated with pH. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for the substance's ecotoxicity data.

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Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
potassium hydroxide	1310-58-3	80 mg/L (Mosquito fish)	N/Av	None.
Sodium chloride	7647-14-5	5480mg/L Bluegill sunfish	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
potassium hydroxide	1310-58-3	56 mg/L Ceriodaphnia (water flea)	N/Av	None.
Sodium chloride	7647-14-5	4136mg/L (Daphnia magna)	314mg/L (Daphnia magna)	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
potassium hydroxide	1310-58-3	N/Av	N/Av	None.
Sodium chloride	7647-14-5	N/Av	N/Av	None.

Persistence and degradability

: Biodegradation is not applicable to inorganic substances.

Bioaccumulation potential : No information available. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
potassium hydroxide (CAS 1310-58-3)	N/Av	N/Av
Sodium chloride (CAS 7647-14-5)	N/Av	no bioaccumulation

Mobility in soil : There is no data available for this product.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle in accordance with good industrial hygiene and safety practice. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Refer to protective measures listed in sections 7 and 8.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local

regulations.

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RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN1814	Potassium hydroxide, solution	8	II	
49CFR/DOT Additional information	May be shipped as LIMITED QUANTITY when transported in quantities no larger than 1 Litre, in packages not exceeding 30 kg gross mass.				
TDG	UN1814	POTASSIUM HYDROXIDE, SOLUTION	8	II	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in quantities no larger than 1 Litre, in packages not exceeding 30 kg gross mass.				
ICAO/IATA	UN1814	Potassium hydroxide solution	8	II	
ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction .				
IMDG	UN1814	POTASSIUM HYDROXIDE SOLUTION	8	II	
IMDG Additional information	Consult the IMDG regulations for exceptions.				

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

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<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
potassium hydroxide	1310-58-3	Yes	1000 lb/ 454 kg	None.	No	N/Ap
Sodium chloride	7647-14-5	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
potassium hydroxide	1310-58-3	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Sodium chloride	7647-14-5	No	N/Ap	No	No	No	No	No	No

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
potassium hydroxide	1310-58-3	215-181-3	Present	Present	(1)-369	KE-29139	Present	HSR001546
Sodium chloride	7647-14-5	231-598-3	Present	Present	(1)-236	KE-31387	Present	HSR002722

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
EC50: Effective Concentration 50%.
EINECS: European Inventory of Existing Commercial chemical Substances

E

NCS: Existing and New Chemical Substances