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SAFETY DATA SHEET

Issue Date: 9 November 2015

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Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **PERMA GRAN**

Product Description: **SOIL STERILANT AND WEED KILLER**

Other Means of Identification

Product # 179
Synonyms None

Details of the Supplier of the Safety Data Sheet

Company Name CHEMCO INDUSTRIES, INC.
5731 Manchester Avenue
St. Louis, MO 63110
www.chemcoindustries.com
314-647-1888
1-800-854-4236 (to Reorder)

Emergency Telephone Number

Emergency Telephone INFOTRAC 1-188-535-5053

2. HAZARDS IDENTIFICATION

Classification (GHS-US)

Carc. 1A H350
*Full text of H-phrases: see section 16

GHS-US Labeling

Hazard pictograms (GHS-US):



Signal Word (GHS-US): **Danger**

Hazard Statements (GHS-US):

May cause cancer

Precautionary statements (GHS-US):

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear eye protection, protective clothing, protective gloves
If exposed or concerned: Get medical advice/attention
Store locked up
Dispose of contents/container to comply with local/regional/national/international regulations.

Other hazards: No additional information available

Unknown acute toxicity (GHS-US): Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance: Not applicable

*Full text of H-phrases: see section 16

Mixture:

Name	Product identifier	%	Classification (GHS-US)
bromacil	(CAS No) 314-40-9	1.0 - 5.0	Eye Irrit. 2A, H319
Crystalline Silica	(CAS No) 14808-60-7	0.05 - 5.0	Carc. 1A, H350
Distillates (petroleum), hydrotreated middle, Gasoil - unspecified, [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C11 through C25 and boiling in the range of approximately 205 °C to 400 °C (401 °F to 752 °F).]	(CAS No) 64742-46-7	1.0 - 5.0	Asp. Tox. 1, H304

4. FIRST AID MEASURES

Description of first aid measures:

First-aid measures after inhalation:	Get medical advice/attention. Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact:	Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
First-aid measures after eye contact:	Direct contact with the eyes is likely irritating.
First-aid measures after ingestion:	Rinse mouth with water. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed:

Symptoms/injuries:	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation:	May cause respiratory irritation.
Symptoms/injuries after skin contact:	Slight irritation.
Symptoms/injuries after eye contact:	Direct contact with the eyes is likely irritating.
Symptoms/injuries after ingestion:	No data available.

Indication of any immediate medical attention and special treatment needed:

No additional information available.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Water spray. Carbon dioxide. Dry chemical powder.

Special hazards arising from the substance or mixture:

Reactivity: On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide). If the product is involved in a fire, it can release toxic chlorine gases. Reacts violently with (strong) oxidizers.

Advice for firefighters:

Firefighting instructions: Exercise caution when fighting any chemical fire. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

General measures:	Remove ignition sources. Use special care to avoid static electric charges.
For non-emergency personnel:	
Protective equipment:	Protective goggles. Gloves. Protective clothing.
Emergency procedures:	Evacuate unnecessary personnel.
For emergency responders:	
Protective equipment:	Equip cleanup crew with proper protection.
Emergency procedures:	Stop leak if safe to do so. Stop release. Ventilate area.

Environmental precautions:

Avoid release to the environment. Prevent entry to sewers and public waters.

Methods and material for containment and clean up:**For containment:**

Collect spillage.

Methods for cleaning up:

This material and its container must be disposed of in a safe way, and as per local legislation. Take up liquid spill into inert absorbent material, e.g.: sand/earth. Clean contaminated surfaces with a soap solution.

Reference to other sections:

No additional information available.

7. HANDLING AND STORAGE

Precautions for safe handling:**Precautions for safe handling:**

Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Do not breathe vapors. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Handle and open the container with care. Keep away from sources of ignition - No smoking. Take precautions against electrostatic charges. Obtain special instructions before use. Remove contaminated clothing immediately.

Hygiene measures:

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities:**Technical measures:**

Comply with applicable regulations.

Storage conditions:

Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from: sparks, open flames, excessive heat.

Storage area:

Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place. Keep locked up.

Special rules on packaging:

Keep only in original container. meet the legal requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

bromacil (314-40-9)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³

Exposure controls:**Personal protective equipment:**

Safety glasses. Gloves. Protective clothing. Use appropriate personal protective equipment when risk assessment indicates this is necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state	Solid
Appearance	Grey granules.
Odor	Mild odor
Odor threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butyl acetate=1)	No data available
Flammability (solid, gas)	No data available
Explosion limits	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Vapor pressure	No data available
Relative density	No data available
Relative vapor density at 20 C	No data available
Specific gravity/density	No data available
Solubility	Soluble in water.
Log Pow	No data available
Log Kow	No data available

Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
VOC content	No data available

10. STABILITY AND REACTIVITY

Reactivity:

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide). If the product is involved in a fire, it can release toxic chlorine gases. Reacts violently with (strong) oxidizers.

Chemical stability:

Combustible liquid. Stable under normal conditions. Risk of explosion if heated under confinement. Heating may cause a fire or explosion.

Possibility of hazardous reactions:

Refer to reactivity.

Conditions to avoid:

No additional information available.

Incompatible materials:

Oxidizing agents.

Hazardous decomposition products:

Thermal decomposition produces: CO, CO₂, Oxides of nitrogen and other potentially toxic fumes.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity: Not classified

bromacil (314-40-9)	
LD50 oral rat	5200 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 4.8 mg/l/4h (Rat)
ATE CLP (oral)	5200.000 mg/kg body weight

Skin corrosion/irritation: Not classified.

Serious eye damage/irritation: Not classified.

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified.

Carcinogenicity: May cause cancer.

Crystalline Silica (14808-60-7)	
IARC group	1 - Carcinogenic to Humans

Reproductive toxicity: Not classified.

Specific target organ toxicity (single exposure): Not classified.

Specific target organ toxicity (repeated exposure): Not classified.

Aspiration hazard: Not classified.

Symptoms/injuries after inhalation: May cause respiratory irritation.

Symptoms/injuries after skin contact: Slight irritation.

Symptoms/injuries after eye contact: Direct contact with the eyes is likely irritating.

Symptoms/injuries after ingestion: No data available.

12. ECOLOGICAL INFORMATION

Toxicity:

bromacil (314-40-9)	
LC50 fish 1	75 mg/l 48 h; Salmo gairdneri (Oncorhynchus mykiss)
LC50 fish 2	71 mg/l (48 h; Leuciscus idus)

Threshold limit other aquatic organisms 1	1 mg/l (Pimephales promelas; Chronic)
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Persistence and degradability:

bromacil (314-40-9)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Photodegradation in the air.

Bioaccumulative potential:

bromacil (314-40-9)	
BCF fish 1	2.8 - 26.5 (672 h; Leuciscus idus; Fresh weight)
BCF fish 2	4.25 (388 h; Pimephales promelas; Fresh weight)
Log Pow	2.11
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Waste disposal recommendations: Dispose of contents/container to comply with local/regional/national regulations.

14. TRANSPORT INFORMATION

Department of Transportation (DOT)

In accordance with DOT: Not regulated for transport

Additional information:

Other information: No supplementary information available.

ADR:

No additional information available.

Transport by sea:

No additional information available.

Air Transport:

No additional information available.

15. REGULATORY INFORMATION

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

bromacil	CAS No 314-40-9	1.0 - 5.0
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bromacil (314-40-9)	
Listed on SARA Section 313 (Specific toxic chemical listings)	

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION: Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing of dust.

16. OTHER INFORMATION

Training advice: Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
H304	Serious eye damage/eye irritation Category 2A
H319	Causes serious eye irritation
H350	May cause cancer

NFPA health hazard: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard: 0 - Materials that will not burn.

NFPA reactivity: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water

Disclaimer

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendee or users assume all risks associated with the use of this material.