SAFETY DATA SHEET

This Safety Data Sheet complies with the Canadian Hazardous Product Regulations, the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910 (OSHA HCS), and the European Union Directives.

1. Product and Supplier Identification

1.1 Product: **Coghlan's Camp Heat #0450**

1.2 Other Means of Identification: None

1.3 Product Use: A metal can, cap & inner seal with a fiberglass wick using the Chemical Diethylene Glycol as a fuel source.

1.4 Restrictions on Use: None known

1.5 Producer:

Coghlan's Ltd.,
121 Irene Street,
Winnipeg, Manitoba
Canada, R3T 4C7

Telephone: +1(204) 284-9550
Facsimile: +1(204) 475-4127
Email: info@coghlans.com

Supplier: **As above**

1.6 Emergencies: +1(877) 264-4526

2. Hazards Identification

2.1 Classification of product or mixture

Note to reader: This product in an untested mixture and GHS classification is based on the classification of the ingredients and their concentrations. Proprietary ingredients, if any, do NOT exhibit any health effects not listed in this SDS.

GHS Classification: Acute Toxicity, Oral, Category 4
Specific Target Organ Toxicity, Repeated Exposure, Category 2

2.2 GHS Label Elements, including precautionary statements

Pictogram:

Signal Word: Warning

GHS Hazard Statements:
H302: Harmful if swallowed.
H373: May cause damage to liver and kidneys through prolonged or repeated oral exposure.

GHS Precautionary Statements:

Prevention:
P260: Do not breathe gas/mist/vapours/spray.
P264: Wash hands and exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.

Response:
P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P314: Get medical advice/attention if you feel unwell.
P330: Rinse mouth.

Storage:
No GHS statements

Disposal:
P501: Dispose of contents/container in accordance with local regulations, following product label directions.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None

2.4 Additional Information

Primary Routes of Entry:

Skin Contact:	No
Skin Adsorption:	Yes. Slowly in healthy skin but faster through lesions and cuts.
Eye Contact:	Yes. May cause mild eye irritation after extended contact.
Ingestion:	Yes
Inhalation:	No. Inhalation of combustion products is only inhalation hazard.

Emergency Overview: This product is toxic by ingestion. Adsorption may occur through unhealthy skin or cuts and lesions. Adsorption will contribute to overall exposure. Ingestion of gross amounts may lead to fatality. Harmful if swallowed in small quantities. Data indicates that 0.14 mg/ kg of body weight is the minimum toxic dosage.

Effects of Short-Term (Acute) Exposure:

Inhalation: Do not breathe vapours or combustion products from this fuel.

Skin Contact: This route of entry is minor for healthy skin. Components of this fuel may be absorbed through cuts or lesions in the skin. In those cases, skin protection should be used.

Eye Contact: Minor irritation to the eye may occur in cases of extended contact. Vapours from burning fuel may irritate the eye.

Ingestion: This product is toxic by ingestion. Do not ingest! Immediately contact a POISON CONTROL CENTRE, doctor or nearest hospital for treatment advice. Ingestion may cause depression of the Central Nervous System and repeat ingestion may seriously harm the kidneys.

Effects of Long-Term (Chronic) Exposure: Repeated oral exposure to this product may cause the formation of oxalate crystals in the kidneys and bladder. Permanent kidney damage may occur.

Medical Conditions Aggravated By Exposure: None known

3. Composition

3.1 Mixture composition

Component	% (w/w)	Exposure Limits (ACGIH)*	LD_{50}	LC_{50}
Diethylene glycol CAS No 111-46-6 EINECS No 203-872-2	99-100	10 mg/m^3 WEEL-TWA (Workplace Environmental Exposure Levels)	12565 mg/kg (oral/rat) 11890 mg/kg (dermal/rat)	N/d
Ethylene glycol CAS No 107-21-1 EINECS No 203-473-3	0 - 1	100 mg/m^3 TLV-TWA	4700 mg/kg (oral/rat) 10626 mg/kg (dermal/rabbit)	N/d
Other undisclosed ingredients and fillers	0	N/ap	N/ap	N/ap
GHS CLASSIFICATION: ACUTE TOX ORAL, Cat 4; STOT-RE, Cat 2				

* ACGIH: American Conference of Governmental Industrial Hygienists. Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

ABBREVIATION KEY: N/p: not published, N/d: not determined, N/ap: not applicable, N/av: not available

4. First Aid Measures

4.1 Description of First Aid Measures

General advice: If ingested or a sudden rash occurs and persists, consult a physician. Show this Safety Data Sheet to the doctor in attendance. Wash hands after handling and skin areas where contact has occurred. It is recommended that hands be washed before eating, drinking or smoking.

In case of eye contact: Wash eye(s) with large amounts of water for at least 15 minutes while holding eyelid(s) open. Get medical attention immediately. Remove contact lenses if easy to do.

In case of skin contact: Remove contaminated clothing and wash affected skin area with soap and water. Do not use contaminated clothing until thoroughly washed with soap and water. In the event that a rash occurs and persists, contact a physician.

If inhalation: Remove from exposure and into fresh air immediately. If breathing is labored, give artificial respiration. Seek medical attention if breathing is difficult or discomfort occurs.

If ingestion: The oral toxicity of this product is of concern. Do not induce vomiting. Never give anything to an unconscious person. Immediately call a POISON CENTER or doctor.

4.2 Most important symptoms and effects, both acute and delayed

Effects of Short-Term (Acute) Exposure:

Inhalation: Do not breathe vapours or combustion products from this fuel.

Skin Contact: This route of entry is minor for healthy skin. Components of this fuel may be absorbed through cuts or lesions in the skin. In those cases, skin protection should be used.

Eye Contact: Minor irritation to the eye may occur in cases of extended contact. Vapours from burning fuel may irritate the eye.

Ingestion: This product is toxic by ingestion. Do not ingest! Immediately contact a POISON CONTROL CENTER, doctor or nearest hospital for treatment advice. Ingestion may cause depression of the Central Nervous System and repeat ingestion may seriously harm the kidneys.

Effects of Long-Term (Chronic) Exposure: Repeated oral exposure to this product may cause the formation of oxalate crystals in the kidneys and bladder. Permanent kidney damage may occur.

Medical Conditions Aggravated By Exposure: None known

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4.3 Indication of any immediate medical attention and special treatment needed
No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Product is a flammable fuel. Use water spray, water, dry chemical or carbon dioxide to extinguish fire. If available, cover with sand and then soak sand with water.

5.2 Special hazards arising from mixture: Combustion or thermal decomposition may produce carbon monoxide and carbon dioxide.

Advice for firefighters: In any fire situation, firefighters should wear full protective clothing including self-contained breathing apparatus. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

5.3 Further Information:

Sensitivity to Impact: No
Sensitivity to Static Discharge: No

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) HAZARD INDEX:

HEALTH: 1

FLAMMABILITY: 1

REACTIVITY: 0

CHRONIC HEALTH: *

PERSONAL PROTECTION: None

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Remove sources of heat, flame and ignition. All spill responders involved in a cleanup of this product must follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective equipment and eye protection to prevent skin and eye contact.

Respiratory Protection: To avoid inhaling smoke/vapours, use self-contained breathing apparatus. Use only approved respirators by NIOSH or OSHA.

Skin protection: Wear suitable protective equipment to prevent skin contact. Nitrile gloves may be used. Wear sufficient clothing to prevent skin exposure.

Eye and Face Protection: Wear chemical goggles or full face protection.

Footwear: No specific recommendation.

Other: None

6.2 Environmental precautions

Do not let this product escape into the environment. Ensure that spilled material does not enter sewers or natural waterways.

Methods and materials for containment and cleanup

Clean up spills immediately. Scoop into an appropriate container for disposal. Remove all sources of heat, ignition and flame. Once the spill has been remediated, arrange for disposal of the containers. Properly label containers to identify contents.

Remedial Measures: Do not use unprotected hands to collect spilled material. Ensure proper protective equipment is used to prevent contact with skin and eyes.

Large Spills: This product is sold in small containers. A large spill isn't possible.

Small Spills: Scoop up spilled contents and place in appropriate containers for disposal. Label appropriately for disposal.

6.3 Reference to other sections

For disposal, see Section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Handling Procedures: Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Wash thoroughly and immediately after handling this product and before eating, drinking or smoking.

7.2 Conditions for safe storage, including incompatibilities

Storage: ***Keep out of reach of children and animals***. Keep container closed when not in use and store in a dry area away from heat. Protect from sparks, heat or flame. Store separate from animal or human foodstuffs and away from strong acids, strong oxidizers, strong bases, aldehydes and aluminum metal.

7.3 Specific end use(s)

No other uses except those mentioned in Section 1.2

8. Exposure Controls, Personal Protection

8.1 Control parameters

Components with workplace control parameters

Diethylene Glycol, CAS No 111-46-6	10 mg/m^3 USA Workplace Environmental Exposure Levels (WEEL)
Ethylene Glycol, CAS No 107-21-1	100 mg/m^3 ACGIH TLV-TWA

8.2 Exposure Controls

Engineering Controls: Only use outdoors where engineering controls are not required. Avoid breathing vapours or smoke from burning this fuel.

Respiratory Protection: To avoid inhaling smoke/vapours, use self-contained breathing apparatus. Use only approved respirators by NIOSH or OSHA.

Skin protection: Wear suitable protective equipment to prevent skin contact. Nitrile gloves may be used. Wear sufficient clothing to prevent skin exposure.

Eye and Face Protection: Wear chemical goggles or full face protection.

Footwear: No specific recommendation.

Other: Wash hands after handling.

Control of environmental exposure

Prevent from entering the environment through natural waterways, sewers or drains.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Viscous, colourless liquid
Odour:	Sweet, very faint
Odour Threshold:	Not available
pH:	Not available
Melting Point/Freezing Point:	-6.5°C
Initial Boiling Point:	245°C
Flash Point:	138°C [Closed Cup]
Evaporation Rate:	Not available
Flammability:	Combustible liquid
Upper Explosion Limit:	12.3% (volume)
Lower Explosion Limit:	2.0% (volume)
Vapour Pressure:	0.002hPa @ 20°C
Vapour Density:	3.65 (air= 1)
Relative Density:	1.118 gm/cc (water = 1)
Solubility:	Completely miscible
Partition Coefficient:	Log Pow = -1.98
Autoignition Temperature:	229°C
Decomposition Temperature:	Not available
Viscosity:	Not available
Explosive Properties:	Not available
Oxidizing Properties:	Not available
Percent Volatiles:	Not available

9.2 **Other safety information:** None

9.3

10. Stability and Reactivity

10.1 Reactivity
No dangerous reactions known under conditions of normal use and storage.

10.2 Chemical Stability
Stable under recommended storage conditions. Storage should be in a cool area away from incompatibles, heat, sparks, flame and sources of ignition.

10.3 Possibility of hazardous reactions
No dangerous reactions known under conditions of normal use and storage.

10.4 Conditions to avoid
Exposure to elevated temperatures can cause this product to decompose. Generation of gas(es) during decomposition can cause pressure buildup within closed containers.

10.5 Incompatible materials
Strong oxidizing agents, strong acids, strong bases.

10.6 Hazardous decomposition products
Irritating and possible toxic gases may be generated by thermal decomposition or combustion. May also form aldehydes, alcohols, ethers, carbon dioxide and carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
Acute Toxicity, Oral, Category 4, H302: Harmful if swallowed.

Skin corrosion/irritation
No GHS classification

Serious eye damage/eye irritation
No GHS classification

Respiratory or skin sensitization
No GHS classification

Germ Cell Mutagenicity
No GHS classification

Carcinogenicity
No GHS classification. Not listed by IARC, ACGIH, NTP or OSHA.

Reproductive toxicity
No GHS classification

Specific Target Organ Toxicity – Single exposure
No GHS classification

Specific Target Organ Toxicity – Repeated exposure
Specific Target Organ Toxicity, Repeated Exposure, Category 2, H373: May cause damage to liver through prolonged or repeated exposure.

Aspiration Hazard
No GHS classification

Aquatic Toxicity

No GHS classification

Additional information
None

12. Ecological Information

12.1 Toxicity

Fish:	Data for *Diethylene Glycol:*	LC_{50} Pimephales promelas 75200 mg/l, 96 hr
		LC_{50} Carassius auratus (Goldfish) 5000 mg/l, 24 hr
Other invertebrates:		EC_{50} Daphnia magna (Water Flea), >10000 mg/l, 24 hr
	Data for *Ethylene Glycol:*	LC_{50} Oncorhynchus mykiss (Rainbow Trout), 18500 mg/l 96hr
		LC_{50} Leuciscus idus, (Golden Orfe), >10000 mg/l, 48 hr
	Other invertebrates:	EC_{50} Daphnia magna (Water Flea), >74000 mg/l, 24 hr

12.2 Persistence and degradability
Diethylene Glycol:
Anaerobic exposure time 28 days, Result: 90 – 100% readily biodegradable (OECD Test Guideline 301B)

12.3 Bioaccumulative potential

Diethylene Glycol:
Leuciscus idus melanotus, 3-day, 0.05 mg/l
Bioconcentration factor (BCF) 100

12.4 Mobility in soil

Given its very low Henry's constant, volatilization from natural bodies of water or
Moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partiton coefficient, soil organic carbon/water (Koc): < 1 Estimated.
Henry's Law Constant. (H): 7.96E-10 atm*m3/mole: 25*C Estimated.

Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water	Biota	Soil	Sediment
0.75 %	99.25 %	0 %	0 %	0 %

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

13. Disposal Considerations

13.1 Waste treatment methods

Product:
Do not reuse empty containers. Dispose of product according to all applicable local, state (provincial), and federal regulations. Offer to a licensed disposal company, properly contained and labelled.

Contaminated Packaging:
As above

14. Transport Information

Transport of Dangerous Goods (TDG and CLR): Not regulated

United States Department of Transport (49CFR): Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:

CEPA, DOMESTIC SUBSTANCES LIST: Listed

AMERICAN FEDERAL REGULATIONS:

TSCA (Toxic Substance Control Act: Listed

CERCLA Hazardous Substance List (40 CFR 302.4) Not regulated

SARA 302 Extremely hazardous substance: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazardous chemical: Acute Health Hazard, Chronic Health Hazard

SARA 313 (TRI reporting): SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Other State Regulations:

Massachusetts Right to Know Components:
Ethylene Glycol, CAS No 107-21-1 — Rev Date 2007-07-01

Pennsylvania Right to Know Components:
Ethylene Glycol, CAS No 107-21-1 — Rev Date 2007-07-01
Diethylene Glycol, CAS No 111-46-6 — Rev Date 1989-08-11

New Jersey Right to Know Components:
Ethylene Glycol, CAS No 107-21-1 — Rev Date 2007-07-01
Diethylene Glycol, CAS No 111-46-6 — Rev Date 1989-08-11

California Prop 65 Components: This product contains a chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Ethylene Glycol, CAS No 107-21-1 — Rev Date 2015-06-19

OTHER:
None

16. Other Information

Original Preparation Date: January 8, 2019

Prepared by: Technical Department, Coghlan's Ltd.

Disclaimer: This Safety Data Sheet (SDS) was prepared using information provided by CCINFO, ingredient supplier SDS and other relevant sources. This product has been classified using weight of evidence, expert judgment and previous testing as per Part 1.3 of the Fifth Edition of The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The information in this SDS is offered for your consideration and guidance when exposed to this product. Coghlan's Ltd expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

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Revisions: None