Safety Data Sheet

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1. IDENTIFICATION

Product Identifier
Product Name KleenCoil

Other means of identification
SDS # NRI-004

Product Code KN_GNC - 1gl, 2.5gl, 5gl, 55gl

Recommended use of the chemical and restrictions on use
Recommended Use Coil cleaner.

Details of the supplier of the safety data sheet
Distributor
National Refrigeration Products
985 Wheeler Way
Langhorne, PA 19047 USA

Emergency Telephone Number
Company Phone Number 1-800-352-6951
Emergency Telephone (24 hr) Chemtrec 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Clear pale to green liquid **Physical State** Liquid **Odor** Solvent

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

Signal Word
Danger

Hazard Statements
Causes skin irritation
Causes serious eye damage

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash it before reuse
Get immediate medical advice/attention

Other Hazards
Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ethylene Glycol Monobutyl Ether	111-76-2	<5
Monoethanolamine	141-43-5	<3
Dodecyl benzene sulfonic acid	27176-87-0	<2
Tetrasodium EDTA	64-02-8	<1

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician. Do NOT drive yourself as vision may be impaired.

Skin Contact IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Seek immediate medical attention/advice.

Inhalation Remove to fresh air. Seek immediate medical attention/advice.

Ingestion Do not induce vomiting. Give large quantities of water. Get medical attention.

Most important symptoms and effects

Symptoms Causes severe eye damage. Causes skin irritation. Can cause respiratory tract irritation. Ingestion may cause mild irritation of the throat, digestive tract, and stomach.

Indication of any immediate medical attention and special treatment needed

Notes to Physician CHRONIC EFFECTS: Prolonged exposure to mists or liquid could result in tissue irritation.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray (fog). Fine spray. Carbon dioxide (CO2). Dry chemical. Foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Floor will become slippery if material is released.

Hazardous Combustion Products Aldehydes. Carbon dioxide (CO2). Other oxides.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Contain and collect with an inert absorbent and place into an appropriate container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Keep away from heat, open flames or other sources of ignition. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from incompatible materials. Keep from freezing.

Incompatible Materials Acids. Organic halogen compounds. Chlorine compounds. Oxidizing materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene Glycol Monobutyl Ether 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m^3 (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m^3 (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m^3
Monoethanolamine 141-43-5	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m^3 (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m^3 (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m^3	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m^3 STEL: 6 ppm STEL: 15 mg/m^3

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical goggles or full face shield.
Skin and Body Protection Impervious rubber gloves. Suitable protective clothing.
Respiratory Protection Ensure adequate ventilation, especially in confined areas.
General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Clear pale to green liquid	**Odor**	Solvent
Color	Clear pale to green	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	12.0 - 13.0	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-Not Applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.01 - 1.03	
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Keep separated from incompatible substances. Keep out of reach of children.

Incompatible Materials
Acids. Organic halogen compounds. Chlorine compounds. Oxidizing materials.

Hazardous Decomposition Products
Aldehydes. Carbon dioxide (CO_2). Other oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye damage.

Skin Contact Causes skin irritation.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol Monobutyl Ether 111-76-2	= 470 mg/kg (Rat)	= 2270 mg/kg (Rat) = 220 mg/kg (Rabbit)	= 2.21 mg/L (Rat) 4 h = 450 ppm (Rat) 4 h
Monoethanolamine 141-43-5	= 1720 mg/kg (Rat)	= 1 mL/kg (Rabbit) = 1025 mg/kg (Rabbit)	-
Dodecyl benzene sulfonic acid 27176-87-0	= 500 mg/kg (Rat)	-	-
Tetrasodium EDTA 64-02-8	= 10 g/kg (Rat)	-	-
Alcohols, C9-11 ethoxylated 68439-46-3	= 1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylene Glycol Monobutyl Ether 111-76-2	A3	Group 3		

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene Glycol Monobutyl Ether 111-76-2		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50

Monoethanolamine 141-43-5	15: 72 h Desmodesmus subspicatus mg/L EC50	227: 96 h Pimephales promelas mg/L LC50 flow-through 3684: 96 h Brachydanio rerio mg/L LC50 static 300 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static 200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through		65: 48 h Daphnia magna mg/L EC50
Dodecyl benzene sulfonic acid 27176-87-0	29: 96 h Pseudokirchneriella subcapitata mg/L EC50	10.8: 96 h Oncorhynchus mykiss mg/L LC50 static 3.5 - 10: 96 h Brachydanio rerio mg/L LC50 static		5.88: 48 h Daphnia magna mg/L EC50
Tetrasodium EDTA 64-02-8	1.01: 72 h Desmodesmus subspicatus mg/L EC50	41: 96 h Lepomis macrochirus mg/L LC50 static 59.8: 96 h Pimephales promelas mg/L LC50 static		610: 24 h Daphnia magna mg/L EC50

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility

Chemical Name	Partition Coefficient
Ethylene Glycol Monobutyl Ether 111-76-2	0.81
Monoethanolamine 141-43-5	-1.91

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG

Marine Pollutant This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA Listed

Legend:
TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Dodecyl benzene sulfonic acid 27176-87-0	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ethylene Glycol Monobutyl Ether - 111-76-2	111-76-2	<5	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Dodecyl benzene sulfonic acid 27176-87-0 (<2)	1000 lb			X

US State Regulations

California Proposition 65

Chemical Name	Type
Monoethanolamine 141-43-5	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene Glycol Monobutyl Ether 111-76-2	X	X	X
Monoethanolamine 141-43-5	X	X	X
Dodecyl benzene sulfonic acid 27176-87-0	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	2	1	1	Not determined

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Disclaimer

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End of Safety Data Sheet