

SAFETY DATA SHEET

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Boiler Antifreeze -100

Section 1- Chemical Product and Company Identification

Product Name: Boiler Antifreeze -100

Supplier: Camco Manufacturing, Inc.
121 Landmark Drive
Greensboro, NC 27409
1-800-334-2004

Product Use: Antifreeze

Product Code: 30027 (Gallon), 30029 (5 Gallon) and 30028 (55 Gallon Drum)

Date of Preparation/Revision: September 15, 2017

In case of Emergency: 1-800-535-5053

Section 2- Hazards identification

Physical State: Liquid. [CLEAR, RED, LIQUID WITH CHARACTERISTIC SWEET ODOR]

WARNING

GHS Classifications

Skin irritation (Category 3)
Eye irritation (Category 2B)

Hazard Statements

H316 Causes mild skin irritation.
H320 Causes eye irritation.

Precautionary statements

P264 Wash hands thoroughly after handling

Response statements

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313 If eye irritation persists get medical advice/attention
P332+313 If skin irritation occurs: Get medical advice/attention

Disposal

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

This material is NOT HAZARDOUS by OSHA Hazard Communication definition.

Slightly combustible liquid. Do not handle near heat, sparks, or open flame.

Warning! May cause minor eye irritation. High aerosol concentrations may cause mild irritation of the nose and throat as well as central nervous system depression. Not expected to cause skin irritation. Not expected to be a sensitizer.

Potential Health Effects: Eyes

Contact with the eyes can cause moderate irritation. Symptoms may include discomfort or pain and redness. Severe over exposure can result in swelling of the conjunctiva along with tissue damage which may lead to blindness.

Potential Health Effects: Skin

This product is irritating to the skin. Depending on the duration of contact, symptoms will include reddening, discomfort, irritation, and possible tissue damage. Repeated contact with this material may produce dermatitis.

Potential Health Effects: Ingestion

Ingestion of high doses may cause discomfort and irritation of the gastrointestinal tract

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Potential Health Effects: Inhalation

This product is irritating to the respiratory system. Inhalation of vapors or mists of the product can cause sneezing, coughing and difficulty breathing. High aerosol concentrations may cause mild reversible irritation of the nose and throat as well as CNS depression

Medical Conditions Aggravated by Exposure

Pre-existing skin and eye conditions.

HMIS Ratings: Health: 0 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

See toxicological information (section 11)

Section 3 - Composition, Information on Ingredients

<u>Name</u>	<u>CAS Number</u>	<u>% Volume</u>
Propylene Glycol	57-55-6	60 - 65%
Dipotassium Phosphate	7758-11-4	1 - 5%

Component Related Regulatory Information

This product is not regulated as defined by 49CFR 172.101 by the US Department of Transportation.

Component Information/Information on Non-Hazardous Components

This product is considered to be non-hazardous by 29 CFR 1910.1200

Section 4 - First Aid Measures

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 3 of this MSDS.

- Eye contact** Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.
- Skin contact** Not expected to present a significant skin hazard under anticipated conditions of normal use. If skin contact occurs, remove contaminated clothing and wash skin thoroughly.
- Ingestion** Ingestion unlikely. If large quantity swallowed, give lukewarm water (pint/ 1/2 litre) if victim completely conscious/alert. Obtain medical attention. Never give anything by mouth to a victim who is unconscious or is having convulsions.
- Inhalation** If inhaled, immediately remove the affected person to fresh air. If the affected person is not breathing, apply artificial respiration. If irritation persists get medical attention.

Notes to Physician

Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5 - Fire-Fighting Measures

FLASH POINT: 228.2 °F (109 °C) **METHOD USED:** PMCC

AUTO-IGNITION TEMPERATURE: 699.8 °F (371 °C)

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: ~ 2.4 vol % UPPER: ~ 17.4 vol %

General Fire Hazards

This product is an aqueous solution which will not burn. Non-Flammable

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Hazardous Combustion Products

Decomposition may yield carbon monoxide compounds and other toxic gases.

Extinguishing Media

SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire Fighting Guidance:

Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. May travel long distances along the ground before igniting and flashing back to vapor sources. Fine sprays/mists may be combustible at temperatures below normal flash point. Aqueous solutions containing less than 95% propylene glycol by weight have no flash point as obtained by standard test methods. However aqueous solutions of propylene glycol greater than 22% by weight, if heated sufficiently, will produce flammable vapors. Always drain and flush systems containing propylene glycol with water before welding or other maintenance. Refer to NFPA Code 13 for guidance in using propylene glycol in sprinkler system applications. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

NFPA Ratings: Health: 0 Fire: 1 Reactivity: 0 Other: none

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6 - Accidental release measures

Containment Procedures

In case of accidental spill, may contaminate water supplies/pollute public waters. Evacuate/limit access. Equip responders with proper protection. Extinguish ignition sources; stop release; prevent flow to sewers or public waters. Notify fire and environmental authorities. Restrict water use for cleanup. Slippery walking/spread granular cover or soak up. Impound/recover large land spill; soak up small spill with inert solids. Use suitable disposal containers. On water, material is soluble and will disperse rapidly unless contained and collected quickly to minimize dispersion. Report per regulatory requirements.

Clean-Up Procedures

Absorb spill with inert material such as: lime, polypads, or other suitable absorbent material. Shovel the absorbed material into appropriate container for disposal.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

Isolate exposure. Wear appropriate personal protective equipment. Follow all Local, State, Federal and Provincial regulations for disposal.

Section 7- Handling and Storage

Handling Procedures

Hygroscopic. Handle with care. After handling, always wash hands thoroughly with soap and water. Always drain and flush systems containing propylene glycol with water before welding or other maintenance. Wear recommended personal protective equipment. Observe precautions pertaining to confined space entry.

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Storage Procedures

Hygroscopic. Keep drums tightly closed to prevent contamination. Store away from heat, sparks, open flames, strong oxidizing agents and direct sunlight. Store at 65-90°F (18-32°C). Stainless steel containers. Lined steel. Mild steel. Reinforced plastic. Use dry nitrogen or low dew point air for tank padding.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles and face shield.

Personal Protective Equipment: Skin

Wear impervious (neoprene) gloves, impervious apron.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of vapors or mists, appropriate approved NIOSH respiratory protection must be provided. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended. An emergency spill response will necessitate the use of more stringent personal protective equipment.

Section 9 - Physical and Chemical Properties

Appearance:	Clear Red Liquid
Odor:	No Odor
Physical State:	Liquid
pH: (@59° F / 15° C)	7.5 – 9.5
Freeze Point:	-70° F (-56.67° C)
Vapor pressure:	Not Applicable
Vapor density:	Not Applicable
Boiling Point:	>228°F (>109° C)
Melting Point:	Not Determined
Solubility (Water):	Completely
Specific Gravity: (@70° F / 21° C)	1.040
Burst Protection:	-100° F (-73.3° C)
Flash Point (PMCC):	228.2° F (109° C)
Auto-ignition Temperature:	699.8° F (371° C)
Flammable Limits in Air by Volume:	LOWER: ~ 2.4 vol % UPPER: ~ 17.4 vol %
Evaporation Rate:	Similar to Water
Decomposition Temperature:	329° F (165°C)
Viscosity (cps):	< 50cps

Physical Properties: Additional Information

No additional information available

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Section 10 - Stability and Reactivity

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Avoid contact with extreme heat and oxidizing agents.

Incompatibility

Reacts with strong oxidizing agents, strong acid and Isocyanates.

Hazardous Decomposition

Decomposition may yield carbon monoxide and other toxic fumes.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Product Summary

No additional toxicology information is available for this product itself. (See Component Toxicity Information).

Component Information

Propylene Glycol 57-55-6

Acute Toxicity - Lethal Doses

LD50 (Oral) Rat 22,000 MG/KG BWT

LD50 (Skin) Rabbit. 20,800 MG/KG BWT

Irritation

Skin: Slight skin irritant. Repeated or prolonged contact with skin may cause dermatitis.

Eye: May cause minor eye irritation. Effects of eye irritation are reversible.

Sensitization

Not expected to cause sensitization by skin contact, however skin reactions of unknown etiology have been described in some hypersensitive individuals following topical application.

Target Organ Effects

Skin: Repeated or prolonged contact with skin may cause defatting and drying of the skin which may result in dermatitis.

Repeated Dose Toxicity

No adverse systemic changes were reported in rats or dogs following repeated dietary exposure to high concentrations of propylene glycol. Cats responded with species-specific hematological changes (Heinz body formation) yet all other tissues were unaffected. No systemic effects, but mild eye and nasal irritation were noted in rats following sub-chronic exposure to high concentrations of propylene glycol aerosol. Overall propylene glycol is of low inherent toxicity following repeated oral or inhalation exposure.

Reproductive Effects

No adverse effect on reproductive performance was seen in male and female mice exposed continuously to high doses of propylene glycol in drinking water for up to 3 months.

Developmental Effects

Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic.

Genetic Toxicity

Negative for genotoxicity both in vitro and in vivo tests.

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Carcinogenicity

No increase in tumors was noted in rats and dogs exposed to high concentrations of propylene glycol via the diet for up to 2 years. The incidence of skin tumors was unaltered in mice following dermal application over a lifetime. Not listed by IARC, NTP, or OSHA.

Other Toxicological Information

No additional information available.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

This material is expected to be non-hazardous to aquatic species.

B: Component Analysis - Ecotoxicity

Propylene Glycol

Ecotoxicity

This material is expected to be non-hazardous to aquatic species.

Acute toxicity to fish

LC50 / 96 HOUR fathead minnow 51,400 mg/l

LC50 / 96 HOUR salmon 51,600 mg/l

Acute toxicity to aquatic invertebrates

EC50 / 48 HOUR Daphnia magna. 43,500 mg/l

EC50 / 48 HOUR saltwater mysid. 27,300 mg/l

Toxicity to aquatic plants

EC50 / 72 HOUR Freshwater Algae. 24,200 mg/l

EC50 / 72 HOUR Marine algae 19,300 mg/l

Toxicity to microorganisms

Summary: No Data Available.

Chronic toxicity to fish

Summary: No Data Available.

Chronic toxicity to aquatic invertebrates

IC25 / waterflea. 13,470 mg/l

Summary: A three generation reproductive study.

Environmental Fate

No other data available for this product.

Section 13 - Disposal Considerations

Comply with federal, state, or local regulations for disposal. Landfill solids at permitted sites. Burn concentrated liquids, diluting with clean, low viscosity fuel. Avoid flameouts and assure that emissions comply with all applicable standards/regulations. Dilute aqueous waste may biodegrade. Assure effluent complies with applicable regulations.

Section 14 - Transport information

US DOT Information

This material is not hazardous as defined by 49CFR 172.101 by the US Department of Transportation.

IMDG

Refer to Current IMDG regulations for full shipping description requirements

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IATA

This material is not prepared or packaged for air transportation

International shipping requirements must be determined by the party offering the material for transportation

Section 15 - Regulatory Information

U.S. Federal regulations

General Product Information

Product is listed under the TSCA. No additional information available.

United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: Chemicals with provided CAS numbers in this material are not subject to the reporting requirements of CERCLA.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Based upon available information, this material is not classified as a health and/or physical hazard according to Section 311 & 312.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations

Connecticut Carcinogen Reporting: This material is not listed.

Connecticut Hazardous Material Survey: This material is not listed.

Florida substances: This material is not listed.

Illinois Chemical Safety Act: This material is not listed.

Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.

Louisiana Reporting: This material is not listed.

Louisiana Spill: This material is not listed.

Massachusetts Spill: This material is not listed.

Massachusetts Substances List:

Extraordinarily hazardous substances must be identified when present in materials at levels greater than state specified criterion. The criterion is $\geq 0.0001\%$. Hazardous Substances (MSL-HS) on the MSL must be identified when present in materials at greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers present in this material, at levels specified in Section 2 - Composition do not require reporting under the statute.

Michigan Critical Material: This material is not listed.

Minnesota Hazardous Substances: This material is not listed.

New Jersey Hazardous Substances: This material is listed.

New Jersey Spill: This material is not listed.

New Jersey Toxic Catastrophe Prevention Act: This material is not listed.

New York Acutely Hazardous Substances: This material is not listed.

New York Toxic Chemical Release Reporting: This material is not listed.

Pennsylvania RTK Hazardous Substances:

Hazardous Substances listed by the State of Pennsylvania must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers in this material at a level which could require reporting under the statute are: **Propylene Glycol**

Special Hazardous Substances listed by the State of Pennsylvania must be identified when present in materials at levels greater than the state specified criterion. The criterion

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is $\geq 0.01\%$. Components with CAS numbers present in this material, at levels specified in Section 2 - Components, do not require reporting under the statute.

Rhode Island Hazardous Substances: This material is not listed

California Prop 65 Warning:

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

Additional Regulatory Information

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

Section 16 - Other information

NFPA CODES: Health	0
Flammability	1
Reactivity	0

Note - NFPA ratings are based on a 0-4 rating scale with 0 representing minimal hazards or risks and 4 representing extreme hazards or risks.

Date of Preparation/Revision: September 15, 2017 (Supersedes all previous MSDS and SDS)

DISCLAIMER

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