



ZIRCON INDUSTRIES, INC.

www.liquidheat.com
www.directchem.com

P.O. Box 22483
Cleveland, Ohio 44122
216/581-7570
FAX 216/581-2868
1-800-547-4328
e-mail: staff@liquidheat.com

SAFETY DATA SHEET

Revision Date: 05/14/2015

1. IDENTIFICATION

Product Name: FREEZE KING GLY 100
Synonym: 1,2,3-Propanetriol, Glycerin, Glycol Alcohol, Glycerol
Chemical Family: Triol, Aliphatic Alcohol
Recommended Use: Chemical intermediate.
Use Restrictions: Not for food use as supplied.

Supplier Name and Address:
ZIRCON INDUSTRIES, INC.
4920 Commerce Pkwy. #9
Cleveland, Ohio 44128
(216) 595-0200
www.liquidheat.com

SDS information:

Emergency Telephone:

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not classified

Hazards Not Otherwise Classified (HNOC)
Not applicable

Label elements

EMERGENCY OVERVIEW

Appearance Clear to Amber Liquid **Physical State** Liquid **Odor** Mild to Moderate Grainy

Precautionary Statements - Prevention
Not applicable

Precautionary Statements - Response
Not applicable

Precautionary Statements - Storage
Not applicable

Precautionary Statements - Disposal
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition Information:

Name	CAS Number	Weight %
Glycerine	56-81-5	82-87
Sodium Chloride	7647-14-5	5-6.5
Fatty Acids	68308-53-2	0-1
Methanol (Methyl Alcohol)	67-56-1	0.2-0.6

4. FIRST AID MEASURES

First Aid Measures

- General advice** In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).
- Inhalation:** Move victim to fresh air. Provide respiratory support, if necessary. Get medical attention if cough or other respiratory symptoms develop.
- Skin Contact:** Wash skin with plenty of soap and water. Get medical attention if irritation persists.
- Eye Contact:** Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.
- Ingestion:** If swallowed, DO NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. If symptoms develop, seek medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Indication of any immediate medical attention and special treatment needed

NOTES TO PHYSICIAN: Contains small amounts of methanol (up to 0.6%). Consult standard literature or contact a poison control center for treatment details.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam or water spray can be used. For large fires, water spray, fog or foam can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media

Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product is not a flammable liquid per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point. Spontaneous combustion may occur under high temperature, closed conditions if material is absorbed in various fiber matrices and oxygen is present (e.g. oily rags). For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep run-off water out of sewers and water sources.

NFPA: Health 1 Flammability 1 Instability 0 Special Hazards -

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Keep public away. Isolate and evacuate area. Shut off source if safe to do so. All contaminated surfaces will be slippery.
- Protective Equipment:** Use personal protection measures as recommended in Section 8.
- Emergency Procedures:** Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
- Environmental precautions:** Avoid release to the environment. Avoid subsoil penetration.
- Methods and materials for containment:** Contain liquid with sand or soil.
- Methods and materials for cleaning up:** Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

- Safe Handling Precautions:** Avoid repeated and prolonged skin contact. Avoid breathing vapors or mists. Use only with adequate ventilation. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.
- Storage Conditions:** Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Store wiping rags in metal cans with tightly fitting lids. Keep away from heat and sources of ignition.
- Incompatible materials** Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Glycerine 56-81-5	-	TWA: 5 mg/m ³ mist, respirable fraction TWA: 15 mg/m ³ mist, total dust	5 mg/m ³ TWA mist, respirable fraction 10 mg/m ³ TWA mist, total dust	-

Sodium Chloride 7647-14-5	-	-	-	-
Fatty Acids 68308-53-2	-	-	-	-
Methanol (Methyl Alcohol) 67-56-1	200 ppm TWA 250 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 200 ppm TWA: 260 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ Skin*	6000 ppm

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Breathing apparatus needed only when aerosol or mist is formed. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear to Amber Liquid
Color	Clear or Amber
Odor	Mild to Moderate Grainy
Odor Threshold	No available data.

<u>Property</u>	<u>Values (Method)</u>
Melting Point / Freezing Point	18-20 °C / 64-68 °F
Initial Boiling Point / Boiling Range	>288 °C / >550 °F
Flash Point	≥ 199 °C / ≥ 390 °F (Closed cup)
Evaporation Rate	No available data.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%)	
Upper Flammability Limit:	No available data.
Lower Flammability Limit:	No available data.
Vapor Pressure	<1 mm Hg @ 72 °F
Vapor Density	3.17 (air=1)
Specific Gravity / Relative Density	1.26
Water Solubility	Miscible in water
Solubility in other solvents	No available data.
Partition Coefficient	No available data.
Decomposition temperature:	No available data.
pH:	5.9-8.3
Autoignition Temperature	>260 °C / >500 °F
Kinematic Viscosity	No available data.
Dynamic Viscosity	No available data.
Explosive Properties	No available data.

Softening Point No available data.
 VOC Content (%) No available data.
 Density No available data.
 Bulk Density Not applicable.

10. STABILITY AND REACTIVITY

Reactivity The product is non-reactive under normal conditions.

Chemical stability The material is stable at 70°F, 760 mmHg pressure.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid Excessive heat, sources of ignition, open flame. Water contamination during storage.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation Excessive inhalation of mist may result in respiratory irritation. Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.

Eye contact Produces little or no irritation on direct contact with the eye.

Skin contact Prolonged and repeated contact may cause defatting and drying of the skin and may lead to irritation and/or dermatitis.

Ingestion Ingestion of large amounts may cause gastrointestinal disturbances.

Acute Toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Glycerine 56-81-5	>10,000 mg/kg (Rat)	>10,000 mg/kg (Rabbit)	> 570 mg/m ³ (Rat) 1 h
Sodium Chloride 7647-14-5	3000 mg/kg (Rat)	>2000 mg/kg (Mouse)	> 42 g/m ³ (Rat) 1 h
Fatty Acids 68308-53-2	-	-	-
Methanol (Methyl Alcohol) 67-56-1	>2000 mg/kg (Rat)	>5000 mg/kg (Rabbit)	>40 mg/L (Rat) 4 h

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

Not expected to be acutely toxic. No long-term effects known.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs & Symptoms Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects None known.

Carcinogenicity Cancer designations are listed in the table below.

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Glycerine 56-81-5	Not Listed	Not Listed	Not Listed	Not Listed
Sodium Chloride 7647-14-5	Not Listed	Not Listed	Not Listed	Not Listed
Fatty Acids 68308-53-2	Not Listed	Not Listed	Not Listed	Not Listed
Methanol (Methyl Alcohol) 67-56-1	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive toxicity None known.

Specific Target Organ Toxicity (STOT) - single exposure Not classified.

Specific Target Organ Toxicity (STOT) - repeated exposure Not classified.

Aspiration hazard No available data.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product is not expected to be harmful to aquatic organisms.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Glycerine 56-81-5	-	96-hr LC50 >10,000 mg/l Rainbow trout (static)	-	24-hr EC50 >10,000 mg/l Daphnia magna
Sodium Chloride 7647-14-5	-	96-hr LC50 > 1,000 mg/l Fathead minnow 96-hr LC50 > 1,000 mg/l Rainbow trout	-	48-hr EC50 >100 mg/l Daphnia magna
Fatty Acids 68308-53-2	-	-	-	-
Methanol (Methyl Alcohol) 67-56-1	-	96-hr LC50 > 100 mg/l Fathead minnow 96-hr LC50 > 10,000 mg/l Rainbow trout	-	48-hr EC50 >10,000 mg/l Daphnia magna

Persistence and degradability Readily biodegradable in the environment.

Bioaccumulation Not expected to bioaccumulate in aquatic organisms.

Mobility in soil Considered to have high mobility in soil based on glycerine content.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues

Long-term storage may result in decomposition of the product.

Safe Handling of Wastes

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required.

Disposal of Wastes / Methods of Disposal

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Transport Information: This material when transported via US commerce is NOT REGULATED by DOT regulations.

DOT (49 CFR 172.101):

UN Proper shipping name: Not Regulated
 UN/Identification No: Not applicable
 Transport Hazard Class(es): Not applicable
 Packing group: Not applicable

TDG (Canada):

UN Proper shipping name: Not Regulated
 UN/Identification No: Not applicable
 Transport Hazard Class(es): Not applicable
 Packing group: Not applicable

15. REGULATORY INFORMATION**US Federal Regulatory Information:**

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Glycerine	NA
Sodium Chloride	NA
Fatty Acids	NA
Methanol (Methyl Alcohol)	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Glycerine	NA
Sodium Chloride	NA
Fatty Acids	NA
Methanol (Methyl Alcohol)	5000 lb final RQ 2270 kg final RQ

SARA: The following EPA hazard categories apply to this product:

Acute Health Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Glycerine	None
Sodium Chloride	None
Fatty Acids	None
Methanol (Methyl Alcohol)	1.0 % de minimis concentration

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Glycerine

Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	SN 3319
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present (mist)
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic (mist); Flammable (mist)
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Not Listed.
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.

Sodium Chloride

Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed.
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Not Listed.
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.

Fatty Acids

Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed.
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Not Listed.
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.

Methanol (Methyl Alcohol)

Louisiana Right-To-Know:	Not Listed.
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California Proposition 65:	Developmental toxicity, initial date 3/16/12
New Jersey Right-To-Know:	SN 1222
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed.
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Flammable - third degree; teratogen
New Jersey - Environmental Hazardous Substances List:	SN 1222 TPQ: 500 lb
Illinois - Toxic Air Contaminants	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	5000 lb RQ (air); 1 lb RQ (land/water)

Canada DSL/NDL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: "This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations."

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Glycerine	Uncontrolled product according to WHMIS classification criteria	-
Sodium Chloride	Uncontrolled product according to WHMIS classification criteria	-
Fatty Acids	Uncontrolled product according to WHMIS classification criteria	-
Methanol (Methyl Alcohol)	B2,D1B,D2A,D2B	0.1%

NOTE: Not Applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety
Revision Date: 05/14/2015

Revision Note:

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.