MATERIAL SAFETY DATA SHEET (C1)R
G.J. Chemical Co

Section I Identification

Distribution Source----------> G.J. Chemical Co., Inc.
Street Address----------> 40 Veronica Avenue, Somerset, NJ 08873
Telephone Number----------> 973-589-1450
Emergency Telephone Number> 1-800-424-9300 Chemtrec

Product Name----------> Glycerine (All Grades)
Product Number----------> 168800, 169000, 169040, 169200, 169230, 169210, 169240, 169270, 169271
Use: Widely used as a food additive (emulsifier, thickener, stabilizer), cosmetic agent, lubricating agent, general reagent etc.
RTECS: MA8050000
Chemical Name or Synonyms--> 1,2,3-propanetriol, glycerol, glycol alcohol

Section II Ingredients

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Glycerine	56-81-5 EC No.200-289-5	80-100	Respirable Mist 10mg/m3(ACGIH) 5ppm (OSHA PEL)

Not a hazardous substance or preparation according to EC directives 67/548/EC

Key: (PEL) = OSHA
(TLV) = OSHA & ACGIH (STEL) = ACGIH (PEL) = OSHA
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health

Section III Health Hazard Data

Physical Appearance: A clear viscous (syrupy) liquid

EMERGENCY OVERVIEW:

CAUTION!
~May cause irritation to skin, eyes, and respiratory tract.
~May affect kidneys

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

GHS Label elements, including precautionary statements
Pictogram none

Signal word Warning
Hazard statement(s)
H316 Causes mild skin irritation.
H320 Causes eye irritation.
Precautionary statement(s)
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

CERCLA RATINGS (SCALE 0-3):	**Health= 1**	**Fire= 1**	**Reactivity= 0**	**Persistence=**
NFPA RATINGS (SCALE 0-4):	**Health= 0**	**Fire= 1**	**Reactivity= 0**	
HMIS RATINGS (SCALE 0-4):	**Health= 0**	**Fire= 1**	**Reactivity= 0**	**PPE= G**

Exposure limits: See Section II

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x

Effects of overexposure:
Acute:

Eye> May cause irritation;

Skin> May cause irritation;

Inhalation> Due to low vapor pressure, inhalation of the vapors at room temperatures is unlikely. Inhalation of mist may cause irritation of respiratory tract.

Ingestion> Low toxicity. May cause nausea, headache, diarrhea.

Chronic: Damage may occur to the kidney or liver.

Medical Conditions Aggravated by Exposure> Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance.

Section IV First Aid Measures

Emergency and First Aid Procedures:

Inhalation> Remove from exposure, restore breathing. Keep warm and quiet. Notify physician.

Eyes (Splash)>Immediately flush eyes with water for 15 minutes. Remove contact lenses, if worn, after initial flushing. Hold eyelids open for complete irrigation. Take to a physician.

Skin (Splash)> Wash affected area with soap and water. Remove contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Consult a physician if irritation persists.

Ingestion> Do NOT induce vomiting. Rinse mouth with water and drink 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Consult a physician or poison control center, treat symptomatically.

Section V Fire and Explosion Hazard Data

Flash Point: 320°F (160°C) CC **LEL %: 0.9%**
UEL %: N/A

Auto-ignition Temp: 698°F (370°C)

Extinguishing Media Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other-->

Special Fire Fighting Procedures: Slight fire hazard when exposed to heat or flame. Shut off source. Water fog may be used to cool closed containers to prevent pressure build up and possible auto ignition when exposed to extreme heat. Wear self-contained breathing apparatus for confined spaces and where there is exposure to vapors. Use full fire-fighting protective clothing.

Unusual Fire and Explosion Hazards: Keep containers tightly closed. Combustible liquid; isolate from all sources of ignition.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion. Glycerine decomposes upon heating above 290°C, forming corrosive gas (acrolein).

Section VI Accidental Release Measures

Protective Measures> Combustible; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory

equipment and fire resistant protective clothing during cleanup operations.

Spill Management> Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent in spill area. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent. Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

Section VII Handling and Storage

Precautionary Measures> This material presents a slight fire hazard. Invisible vapor can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing

General Handling Information> Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.

Static Hazard> Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 "Flammable and Combustible Liquids" and National Fire Protection Association (NFPA 77) "Recommended Practice on Static Electricity".

General Storage Information> Do not store above 120°F. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally.

Container Warnings> Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

Section VIII Exposure Controls and Personal Protection

General Considerations> Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.
Engineering Controls> Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

Personal Protective Equipment:
Respiratory Protection> For known vapor concentrations >1 <10 times ACGIH TLV use a NIOSH/MSHA Type P95 or R95 particulate respirator. For exposures greater than 50 times ACGIH TLV use full face-piece particulate respirator NIOSH Type P100 or R100. For emergencies or unknown vapor concentrations use full-face piece positive-pressure air supplied respirator.
Gloves> Butyl rubber chemical resistant gloves.

Eye Protection> Use safety eyewear with splash-guards, goggles, or face shield.

Other Protective Clothing or Equipment> Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse. Users should determine acceptable performance characteristics of protective clothing.

Shower and eyewash should be located in an easily accessible location to the work area.

Section IX Physical and Chemical Properties

Appearance ----------> Clear viscous (syrupy) liquid
Odor----------> Odorless
Boiling Range (°F)----------> 554°F (290°C)
Melting Point (°F)----------> 64°F (18°C)
Solubility in water----------> Miscible
Vapor Density (air=1)----------> 3.17
Evaporation Rate (Butyl Acetate=1)> No information found
Vapor Pressure----------> 0.0025mmHg@122°F (50°C)
Specific Gravity----------> 1.2636

Section X Stability and Reactivity Data

Stability: Unstable ( ) Stable (X)
Conditions to avoid--> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame.

Incompatibility (Materials to Avoid)--> Strong oxidizers. Can react violently with acetic anhydride, calcium oxychloride, chromium oxides, and alkali metal hydrides.
Hazardous decomposition products--> Toxic gases and vapors may be released if involved in a fire. Glycerine decomposes upon heating above 290°C, forming corrosive gas (acrolein).

Hazardous Polymerization--> May occur ( ) Will not occur (X)

Section XI Toxicity Data

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	Oral LD50(Rat)	Skin LD50(Rabbit)	Inhalation LC50
Glycerine	12,600mg/kg	10,000mg/kg	

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP or OSHA.
Specific target organ toxicity - single exposure (Globally Harmonized System) no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System) no data available

Section XII Ecological Information

Environmental Fate: When released into the soil, this material is expected to readily biodegrade. When released into the soil this material is not expected to evaporate significantly. When released into water, this material is expected to readily biodegrade. This material is not expected to significantly bio-accumulate. When released into the air, this material may be moderately degraded by reaction with photo-chemically produced hydroxyl radicals.

Environmental Toxicity: This material is not expected to be toxic to aquatic life. LC50: 58.5ppm 96hours Trout

Section XIII Disposal Considerations

Waste Disposal Method> Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment, and or

disposal methodologies for spent materials and residues at time of disposition. Dispose in accordance with all applicable disposal regulations. Incinerate under controlled conditions in a permitted facility.

Section XIV Transport Information

DOT Shipping Name----------> Not DOT Regulated
DOT Hazard Classification---->
DOT Label Codes----------->
DOT ID Number----------->
DOT Package Code----------->
Emergency Response Guide->
Marine Pollutant----------->

Section XV Regulatory Information

(RQ) Reportable Quantity-> CERCLA

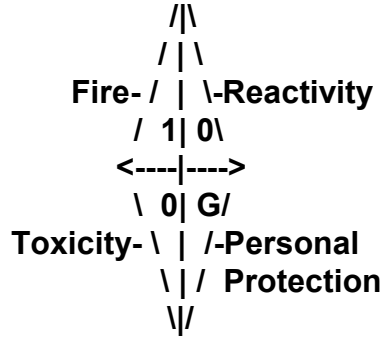
Sara 302 - No
Sara 313 - No

Sara Section 311 List Hazards:
(a) Immediate Acute Health>>>>>>>> No
(b) Delayed Chronic Health>>>>>>>> Yes
(c) Fire>>>>> No (d) Reactive>>>>> No
(e) Sudden Release of Pressure>>>> No

Massachusetts Right To Know Components
Glycerol CAS-No.56-81-5
Pennsylvania Right To Know Components
Glycerol CAS-No.56-81-5
New Jersey Right To Know Components
Glycerol CAS-No.56-81-5
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other

Section XVI Other Information

HMIS (Hazardous Materials Identification System)
Hazard Rating:
4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant



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Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygenists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American Nation Standards Institute
API	-	American Petroleum Institute
CERCLA	-	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation
EC-50	-	Effective Concentration
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
LD-50	-	Lethal Dose
MAK	-	Germany Maximum Concentration Values
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)
NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)
RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System