

Material Safety Data Sheet

JEFFSOL® GLYCERINE CARBONATE (JEFFSOL® GC)

1. Product and company identification

Product name : JEFFSOL® GLYCERINE CARBONATE (JEFFSOL® GC)
Material uses : Solvent.
(M)SDS # : 00019749
Validation date : 11/9/2012.
Print date : 11/9/2012.

Supplier/Manufacturer : Huntsman International LLC
P.O. Box 4980
The Woodlands, TX 77387

Technical Information: (281) 719-7780
E-Mail: MSDS@huntsman.com

In case of emergency : Chemtrec: (800) 424-9300 or (703) 527-3887

2. Hazards identification

Physical state : Liquid.
Odor : Slight
Color : Clear Colorless to light yellow.
OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Emergency overview : CONTAMINATION BY MOISTURE WILL RESULT IN A PRESSURE BUILD-UP IN SEALED CONTAINERS.
Avoid prolonged contact with eyes, skin and clothing.

See toxicological information (Section 11)

GENERAL INFORMATION : Read the entire MSDS for a more thorough evaluation of the hazards.

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Glycerine carbonate	931-40-8	60 - 100

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

4 . First aid measures

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

5 . Fire-fighting measures

Flash point : Closed cup: >190°C (>374°F)
Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

General information

Appearance

- Physical state** : Liquid.
- Color** : Clear Colorless to light yellow.
- Odor** : Slight

Important health, safety and environmental information

- pH** : 4 to 6.5
- Boiling/condensation point** : Decomposition temperature: >160°C (320°F)
- Melting/freezing point** : -70 to -60°C (-94 to -76°F)
- Flash point** : Closed cup: >190°C (>374°F)
- Flammable limits** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : >160°C (>320°F)
- Vapor pressure** : Not available.
- Specific gravity** : 1.4

9 . Physical and chemical properties

Partition coefficient: n-octanol/water (log Kow)	: -1.6
Viscosity	: Dynamic: 85 mPa·s (85 cP) Kinematic: 0.61 cm ² /s (61 cSt)
Density	: 1.39 g/cm ³ [25°C (77°F)]
Vapor density	: Not available.
Evaporation rate (butyl acetate = 1)	: <0.005 (butyl acetate = 1)

10 . Stability and reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Endpoint	Species	Result	Exposure
Glycerine carbonate	LD50 Dermal LD50 Oral	Rabbit Rat	>3000 mg/kg >5000 mg/kg	- -

Sensitizer

Product/ingredient name	Test	Route of exposure	Species	Result
Glycerine carbonate	-	skin	Guinea pig	Not sensitizing

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Eye contact	: No known significant effects or critical hazards.

Potential chronic health effects

General	: No known significant effects or critical hazards.
Target organs	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Medical conditions aggravated by over-exposure	

11 . Toxicological information

None known.

12 . Ecological information

Environmental effects : Readily biodegradable This product shows a low bioaccumulation potential.

Aquatic ecotoxicity

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
Glycerine carbonate	-	Acute LC50	96 hours	Fish	>1040 mg/L

Persistence and degradability

Product/ingredient name	Test	Period	Result
Glycerine carbonate	-	28 days	90.5 to 93.6 %

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Glycerine carbonate	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Glycerine carbonate	-1.6	-	low

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5 : Not determined.

COD : Not determined.

TOC : Not determined.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

14 . Transport information

Proper shipping name

DOT : Not regulated.
TDG : Not regulated.
IMDG : Not regulated.
IATA : Not regulated.

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Class	Not regulated.	-	-		-
IATA-DGR Class	Not regulated.	-	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Not regulated.

U.S. Federal regulations

TSCA 8(b) inventory : **United States inventory (TSCA 8b)**: All components are listed or exempted.

TSCA 5(a)2 final : No ingredients listed.

significant new use rule (SNUR)

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 302/304/311/312 : **SARA 302/304/311/312 extremely hazardous substances**: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : No ingredients listed.

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 : No ingredients listed.

15 . Regulatory information

CERCLA Hazardous substances : No ingredients listed.

State regulations

PENNSYLVANIA - RTK : No ingredients listed.

California Prop. 65 : **WARNING:** This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>
Methanol	No.	Yes.

International regulations

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

CEPA DSL : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International lists :

- Australia inventory (AICS):** At least one component is not listed.
- China inventory (IECSC):** All components are listed or exempted.
- Japan inventory:** All components are listed or exempted.
- Korea inventory:** All components are listed or exempted.
- New Zealand Inventory of Chemicals (NZIoC):** At least one component is not listed.
- Philippines inventory (PICCS):** At least one component is not listed.

16 . Other information

Label requirements : CONTAMINATION BY MOISTURE WILL RESULT IN A PRESSURE BUILD-UP IN SEALED CONTAINERS.

Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	1
Physical hazards	0
Personal protection	

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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16 . Other information

Indicates information that has changed from previously issued version.

Notice to reader

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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