



**CHEMICAL ASSOCIATES**  
1270 South Cleveland-Massillon Road  
Building B  
Copley, OH 44321-1683

## MATERIAL SAFETY DATA SHEET

**EMERGENCY PHONE: 800-347-2891**  
**MSDS REFERENCE: CA2818**

**CHEMTREC: 800-424-9300**

### SECTION I - IDENTIFICATION

**PRODUCT:** CA2818 USP GLYCERINE 99.7%  
**SYNONYMS:** GLYCEROL; GLYCERIN; 1,2,3-PROPANETRIOL;  
1,2,3-TRIHYDROXYPROPANE  
**CHEMICAL:** ALCOHOL, ALIPHATIC  
**CAS NO:** 56-81-5  
**SARA HAZARD:** NONE NOTED (SECTION 311/312)  
TITLE III SECTION 313 - NOT LISTED

### SECTION II - INGREDIENTS AND HAZARD CLASSIFICATION

COMPOSITION	TYPICAL %	PEL/TLV	HAZARD
GLYCERINE (56-81-5)	99.8	SEE SECT IV	NONE NOTED

### SECTION III - HEALTH INFORMATION

**INHALATION:** NUISANCE PARTICULATES HAVE BEEN REPORTED FOR GLYCERINE MIST.

**INGESTION:** LD50: 12.6 G/KG (RAT); LD50:4.1 G/KG (MOUSE); LD50:7.8 G/KG (GUINEA PIG)

**EYE CONTACT:** 126 MG OF GLYCERINE APPLIED TO THE EYES OF RABBITS IN A DRAIZE TEST RESULTED IN MILD IRRITATION.

**SKIN CONTACT:** PRIMARY IRRITATION INDEX OF GLYCERINE = 0.3. 500 MG OF GLYCERINE APPLIED TO THE SKIN OF RABBITS OVER A 24 HOUR PERIOD RESULTED IN MODERATE IRRITATION.

### SECTION IV - OCCUPATIONAL EXPOSURE LIMITS

**PEL:** TWA: 10 MG/M3 (GLYCERINE MIST - TOTAL DUST)  
TWA: 5 MG/M3 (GLYCERINE MIST - RESPIRABLE FRACTION)

**TLV:** TWA: 10 MG/M3 (GLYCERINE MIST)

## SECTION V - EMERGENCY FIRST AID PROCEDURE

- INGESTION:** ONLY A CONCERN IF A LARGE QUANTITY IS INGESTED. GIVE 3-4 GLASSES OF WATER TO DILUTE, BUT DO NOT ATTEMPT TO GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. CALL A PHYSICIAN OR POISON CONTROL CENTER FOR ADVICE.
- INHALATION:** IMMEDIATELY REMOVE VICTIM TO FRESH AIR. IF VICTIM HAS STOPPED BREATHING GIVE ARTIFICIAL RESPIRATION, PREFERABLY BY MOUTH TO MOUTH AND SEEK MEDICAL ATTENTION IMMEDIATELY. IF EXPOSURE HAS BEEN MINIMAL, SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION SHOULD DEVELOP OR IF BREATHING BECOMES DIFFICULT.
- EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH PLENTY OF COOL WATER FOR AT LEAST 15 MINUTES. DO NOT LET VICTIM RUB EYES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS OR WORSENS AFTER FLUSHING.
- SKIN CONTACT:** WASH AFFECTED AREA WITH SOAP AND WARM WATER. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS. WASH CONTAMINATED CLOTHING BEFORE REUSE.

## SECTION VI - PHYSICAL DATA

- BOILING POINT:** 340 DEG F (171 DEG C)  
**MELTING POINT:** 64 DEG F (18 DEG C)  
**VAPOR PRESSURE:** < 0.001 MM HG PRESSURE AT 25 DEG C  
**SPECIFIC GRAVITY:** 1.2612 25/25 DEG C  
**SOLUBILITY IN WATER:** SOLUBLE  
**APPEARANCE AND COLOR:** WATER WHITE LIQUID  
**VAPOR DENSITY (AIR = 1)** 3.1

## SECTION VII - FIRE AND EXPLOSION HAZARDS

- FLASH POINT AND METHOD USED:** 390 DEG F (199 DEG C) (CLOSED CUP)  
**FLAMMABLE LIMITS IN AIR, % BY VOL. LOWER:** NOT ESTABLISHED  
**FLAMMABLE LIMITS IN AIR, % BY VOL. UPPER:** NOT ESTABLISHED  
**NFPA RATING: HEALTH: (1) FIRE: (1) REACTIVITY: (0)**  
**HMIS RATING: HEALTH: (1) FIRE: (1) REACTIVITY: (0)**

### SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

INDIVIDUALS SHOULD PERFORM ONLY THOSE FIRE PROCEDURES FOR WHICH THEY HAVE BEEN TRAINED. WATER OR FOAM MAY CAUSE FROTHING WHEN APPLIED TO FLAMMABLE LIQUIDS HAVING FLASH POINTS ABOVE 212 DEG F (100 DEG C). THE REMARK IS INCLUDED ONLY AS A PRECAUTION AND DOES NOT MEAN THAT WATER OR FOAM SHOULD NOT OR COULD NOT BE USED IN FIGHTING FIRES IN SUCH LIQUIDS. THE FROTHING MAY BE QUITE VIOLENT AND COULD ENDANGER THE LIFE OF THE FIREFIGHTER PARTICULARLY WHEN SOLID STREAMS ARE DIRECTED INTO THE HOT BURNING LIQUID. ON THE OTHER HAND, WATER SPRAY CAREFULLY APPLIED HAS FREQUENTLY BEEN USED WITH SUCCESS IN EXTINGUISHING SUCH FIRES BY CAUSING THE FROTHING TO OCCUR ONLY ON

THE SURFACE AND THIS FOAMING ACTION BLANKETS THE EXTINGUISHES THE FIRE. (NFPA 325M-1984)

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS IN THE POSITIVE-PRESSURE MODE WITH A FULL FACE PIECE WHEN THERE IS A POSSIBILITY OF EXPOSURE TO SMOKE, FUMES OR HAZARDOUS DECOMPOSITION PRODUCTS. GLYCERINE CAN REACT VIOLENTLY OR EXPLOSIVELY ON CONTACT WITH STRONG OXIDIZING MATERIALS OR STRONG ACIDS.

<b>SECTION VIII - REACTIVITY</b>
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<b>STABILITY:</b>	GENERALLY STABLE
<b>HAZARDOUS POLYMERIZATION:</b>	NONE LIKELY
<b>CONDITIONS AND MATERIALS TO AVOID:</b>	AVOID EXCESSIVE HEAT AND OPEN FLAMES GLYCERINE IS INCOMPATIBLE WITH STRONG ACIDS AND STRONG OXIDIZERS. CONTACT WITH THESE MATERIALS MAY RESULT IN EXPLOSIVE OR VIOLENT REACTIONS.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	THERMAL DECOMPOSITION RELEASES CORROSIVE FUMES OF ACROLEIN. DECOMPOSITION MAY RESULT IN CARBON MONOXIDE AND CARBON DIOXIDE.

<b>SECTION IX - EMPLOYEE PROTECTION</b>
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**CONTROL MEASURES:**

PROVIDE ADEQUATE LOCAL EXHAUST VENTILATION TO MAINTAIN CONCENTRATION BELOW ACCEPTABLE EXPOSURE CRITERIA (SECTION II AND IV)

**RESPIRATORY PROTECTION:**

WHERE EXPOSURE IS LIKELY TO EXCEED ACCEPTABLE CRITERIA (SEE SECTIONS II AND IV), USE NIOSH/OSHA APPROVED RESPIRATORY EQUIPMENT. RESPIRATORS SHOULD BE SELECTED BASED ON THE FORM AND CONCENTRATION OF CONTAMINANT IN AIR AND IN ACCORDANCE WITH OSHA (29 CFR 1910.134)

**PROTECTIVE CLOTHING:**

WEAR GLOVES AND PROTECTIVE CLOTHING THAT ARE IMPERVIOUS TO THE PRODUCT FOR THE DURATION OF ANTICIPATED EXPOSURE IF THERE IS POTENTIAL FOR PROLONGED OR REPEATED SKIN CONTACT.

**EYE PROTECTION:**

WEAR SAFETY GLASSES MEETING THE SPECIFICATIONS OF ANSI STANDARD Z87.1 WHERE NO CONTACT WITH THE EYE IS ANTICIPATED. CHEMICAL SAFETY GOGGLES MEETING THE SPECIFICATIONS OF ANSI STANDARD Z87.1 SHOULD BE WORN WHENEVER THERE IS THE POSSIBILITY OF SPLASHING OR OTHER CONTACT WITH THE EYES.

## SECTION X - ENVIRONMENTAL PROTECTION

### ENVIRONMENTAL PRECAUTIONS:

AVOID UNCONTROLLED RELEASES OF THIS MATERIAL. WHERE SPILLS ARE POSSIBLE. A COMPREHENSIVE SPILL RESPONSE PLAN SHOULD BE DEVELOPED AND IMPLEMENTED.

### SPILL OR LEAK PRECAUTIONS:

WEAR APPROPRIATE RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING AS DESCRIBED IN SECTION IX. CONTAIN SPILLED MATERIAL. TRANSFER TO SECURE CONTAINERS. WHERE NECESSARY, COLLECT USING ABSORBENT MEDIA. IN THE EVENT OF AN UNCONTROLLED RELEASE OF THIS MATERIAL, THE USER SHOULD DETERMINE IF THE RELEASE IS REPORTABLE UNDER APPLICABLE LAWS AND REGULATIONS.

### WASTE DISPOSAL:

ALL RECOVERED MATERIAL SHOULD BE PACKAGED, LABELED, TRANSPORTED, AND DISPOSED OR RECLAIMED IN CONFORMANCE WITH APPLICABLE LAWS AND REGULATIONS AND IN CONFORMANCE WITH GOOD ENGINEERING PRACTICES. AVOID LANDFILLING OF LIQUIDS. RECLAIM WHERE POSSIBLE.

## SECTION XI - REGULATORY CONTROLS

### DEPARTMENT OF TRANSPORTATION:

**DOT CLASSIFICATION:** NOT REGULATED

**DOT PROPER SHIPPING NAME:**

**OTHER DOT INFORMATION:**

### OTHER REGULATORY REQUIREMENTS:

LISTED IN TSCA INVENTORY

LISTED ON CANADIAN DSL

### CERCLA HAZARDOUS MATERIALS:

NONE NOTED

## SECTION XII - PRECAUTIONS: HANDLING, STORAGE AND USAGE

STORE IN A COOL, DRY, VENTILATED AREA. PROTECT THE AREA FROM CONTAMINATION BY ACID FUMES. PROVIDE ADEQUATE VENTILATION. CONTAINERS SHOULD BE SEALED AS TIGHTLY AS POSSIBLE. INSPECT THE AREA PERIODICALLY FOR DEFICIENCIES.

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Chemical Associates bears responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

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**DATE: 12/09/11**  
**SUPERSEDES: 10/29/09**