

SAFETY DATA SHEET

PLEXUS

1. Identification

Trade Name: Plexus

Family: Adjuvant

Formula: Proprietary blend

Manufacturer: Rosens's Inc; 700 SW 291 Hwy, Ste. 204, Liberty, MO 64068.

Phone: 877-781-9191

For Chemical Emergencies call Chemtrec at 800-424-9300

For Other Emergencies call 911 and/or Appropriate Regulatory Agencies

2. Hazard Identification

Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Serious eye damage, Category 1 H318: Causes serious eye damage.

Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram:



Signal Word: Danger

Hazard Statements:

H318 Causes serious eye damage.

Precautionary Statements:

Prevention

Wear eye protection/ face protection.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/ physician.

3. Composition/Information on Ingredients

Principal Materials	CAS#	Percent	Threshold Limit Value
Proprietary Blend		> 98%	
Propylene Glycol	57-55-6	< 2%	50 ppm

4. First Aid Measures

Emergency First Aid Measures:

Eye Exposure:

Flush eyes with water for at least 15 minutes. Seek medical attention if irritation develops or persists.

Skin Exposure:

Wash with soap and water for at least 15 minutes. Seek medical attention if irritation develops or persists. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.

Inhalation:

Remove subject from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer CPR (cardio-pulmonary resuscitation). Seek medical attention.

Ingestion:

Do not induce vomiting, unless directed to do so by a physician. If victim is conscious and alert, wash out mouth with water and keep at rest. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side. Seek medical attention.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Skin contact may aggravate existing skin disease. Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.

NOTES TO PHYSICIAN:

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to possibility that overexposure to materials other than this product may have occurred.

Treat symptomatically. No specific antidote available.

5. Fire Fighting Measures

Flash Point: 110 C (230 F) Flammability Class: WILL BURN

Method Used: Setaflash Closed Cup

Extinguishing Media: (Small fires): dry chemical, carbon dioxide, (Large fire): alcohol foam, universal foam.

Recommended: Use carbon dioxide or dry chemical

Not Recommended: Water jet

Special Fire Fighting Procedures:

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards: Product will burn under conditions

Hazardous Decomposition Materials (Under Fire Conditions): oxides of nitrogen, sulfur and carbon

6. Accidental Release Measures

Evacuation Procedures and Safety:

Wear appropriate protective gear for the situation. See personal protection information in Section 8.

Containment of Spill:

Stop leak if it can be done without risk. Dike spill using absorbent or impervious materials such as earth, sand or clay. Follow procedure described below under Cleanup and Disposal of Spill.

Cleanup and Disposal of Spill:

Absorb with an inert absorbent. Sweep up and place in an appropriate closed container (see Section 7: Handling and Storage Information). **DO NOT RETURN MATERIAL TO ITS ORIGINAL CONTAINER.** Clean up residual material by washing area with water. Collect washings for disposal. Decontaminate tools and equipment following cleanup.

Environmental and Regulatory Reporting:

Do not flush to drain. Prevent material from entering public sewer system or any waterways. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. Handling and Storage Information

Minimum/Maximum Storage Temperature:

7 to 49 C (45 to 120 F)

Handling:

Avoid breathing vapors and mists. Avoid direct or prolonged contact with skin and eyes. **DO NOT ALLOW TO FREEZE.** If freezing occurs, thaw and remix before using. Mix thoroughly to assure homogeneity.

Ethylene oxide may collect in container head space. Although concentrations are expected to remain below established exposure limits, provide adequate ventilation when accessing or working with open containers and tanks.

Storage:

Store in tightly closed containers. Store in an area that is dry, well-ventilated, away from ignition sources, away from incompatible materials (see Section 10. Stability and Reactivity).

8. Exposure Controls / Personal Protection Information

Introductory Remarks:

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with section 13: Disposal Information.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling Limit:

PROPYLENE GLYCOL

	TWA
AIHA	10 mg/cu m
AIHA	50 ppm

Engineering Controls:

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures; general area dilution/exhaust ventilation.

Respiratory Protection:

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Eye/Face Protection:

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through the uses of chemical safety glasses with side shields or splash-proof goggles. An emergency eye wash must be readily accessible to the work area.

Skin Protection:

Skin contact should be prevented through use of permeation resistant clothing, gloves and footwear, selected with regard for use conditions and exposure control. An emergency shower must be readily accessible to the work area. Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material.

1. Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
2. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3. Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. Physical and Chemical Properties

Physical Appearance &

Odor:	Light brown suspension liquid/Characteristic odor
pH:	6.5 to 8.5 at 5 wt/wt%
Specific Gravity/Density:	0.93 to 0.94 g/mL
Water Solubility:	Dispersible

Melting Point Range:	-16 C (3 F)
Freezing Point Range:	-5 C (23 F)
Boiling Point Range:	No Data Available
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Evaporation Rate:	<1(Butyl Acetate=1)
Percent Non-Volatiles by Weight:	> 90
Percent Volatiles by Volume:	< 10
Viscosity:	< 4000cs at 25 C (77 F)

10. Stability and Reactivity Information

Chemical Stability:

This material is stable under normal handling and storage conditions described in Section 7.

Conditions to be Avoided:

Excessive heat, open flame, spark, ignition sources.

Materials/Chemicals to be Avoided:

Strong oxidizing agent's, strong bases.

Hazardous Polymerization:

Will not occur

Avoid the Following Conditions to Inhibit Hazardous Polymerization:

Not applicable

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal

Oxides of nitrogen, sulfur or carbon.

11. Toxicological Information

Acute Eye:	Severe irritant. Can cause redness, irritation
Acute Skin:	Irritant. Can cause redness, irritation, inflammation on prolonged contact.
Acute Inhalation:	Inhalation unlikely, unless mists are generated. Mists may cause respiratory tract irritation, some individuals may develop a respiratory allergenic response.
Acute Ingestion:	Low acute oral toxicity. May cause nausea, irritation, abdominal cramps, vomiting.
Chronic Effects:	This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

12. Ecological Information

Ecotoxicological Information:

No data found for this product.

Chemical Fate Information:

No data found for this product.

13. Disposal Information

Cleanup and Disposal of Spill:

Dike or container spill. Absorb with inert material and dispose. Flush area with water. Prevent washings from entering waterways. Spills may be reportable to the National Response Center (800) 424-8802 in the United States. Dispose of in accordance with local, state, federal or provincial regulations. Rinse with an appropriate solvent. Refer to Section 6 for more information.

14. Transport Information

Data on Listed Transport Classification:

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US DOT:
Not Regulated

TDG:
Not Dangerous

IMO:
Not Regulated

IATA:
Not Regulated

15. Regulatory Information

Inventory Status

Inventory	Status
United States (TCSA)	Y
Canada (DSL)	Y
Europe (EINECS/ELINCS)	P
Australia (AICS)	Y
Japan (MITI)	N
South Korea (KECL)	Y

Y= All Ingredients are on the inventory.
E= All Ingredients are on the inventory or exempt from listing.
P= One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N= Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

Federal Regulations

Inventory Issues:

All functional components of this product are listed on the TSCA Inventory.

SARA Title III Hazard Classes:

Fire Hazard - NO
 Reactive Hazard - NO
 Release of Pressure - NO
 Acute Health Hazard - YES
 Chronic Health Hazard - NO

CERCLA Reportable Quantity

Ingredient Name:	Cas #	Reportable Quantity
1,4-Dioxane	123-91-1	100 lb
Ethylene Oxide	75-21-8	10 lb
Acetaldehyde	75-07-0	1000 lb

SARA 304 Reportable Quantity

Ingredient Name:	Cas #	Reportable quantity
Ethylene Oxide	75-21-8	10 lb

SARA 302 Reportable Quantity

Ingredient Name:	Cas #	Reportable quantity
Ethylene Oxide	75-21-8	10 lb

16. Other Information

National Fire Protection Association Hazard Ratings (NFPA)

2 Health Hazard Rating- Moderate
 1 Flammability Rating- Slight
 0 Instability Rating- Minimal

Key Legend Information:

ACGIH- American Conference of Governmental Industrial Hygienists
 OSHA- Occupational Safety and Health Administration
 TLV- Threshold Limit Value
 PEL- Permissible Exposure Limits
 TWA- Time Weighted Average
 STEL- Short Term Exposure Limit
 NTP- National Toxicology Program
 IARC- International Agency for Research on Cancer

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The information provided in this Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. We reserve the right to revise Safety Data Sheets from time to time as new technical information becomes available. The information contained herein is furnished without warranty of any kind.