

SAFETY DATA SHEET

Excalibur

1. Identification

Trade Name: Excalibur

Family: Foam Marking Agent

Formula: Proprietary blend of Alkyl and Alkyl Ether Sulfates, Hydroxyalkylamides, Alkyl Hydroxides, Alkoxyalcohol and Succinic Acid Derivatives.

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

HCS 2012 (29 CFR 1910.1200)

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Flammable liquids, Category 4 : Combustible liquid.

Skin irritation, Category 2 : Causes skin irritation.

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

Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram :



Signal Word: Danger

Hazard Statements:

Combustible liquid.

Causes skin irritation.

Causes serious eye damage

Precautionary Statements:

Prevention

Keep away from heat/sparks/open flames/hot surfaces.

Wash thoroughly after handling.

Do not handle until all safety precautions have been read and understood.

Wear eye protection/ face protection.

Use personal protective equipment as required.

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.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

In case of fire: use dry sand, dry chemical or alcohol resistant foam for extinction.

Storage

Store in a well ventilated place. Keep cool.

Disposal

Dispose of contents/container in accordance with all applicable regulations.

Other hazards which do not result in classification

Toxic to aquatic life.

Harmful to aquatic life with long lasting effects.

3. Composition/Information on Ingredients

Mixture

Synonyms : Proprietary foam marker agent.

Hazardous Ingredients and Impurities

Chemical Name	Identification Number CAS-No.	Concentration (%)
Ethylene Glycol Monobutyl Ether	111-76-2	12.5
Proprietary surfactant blend	Trade secret	83.5
Ethanol	64-17-5	2.75
Polyethylene Glycol	25322-68-3	1.5

*The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Description of first-aid measures

General advice: First responder needs to protect himself.

Place affected apparel in a sealed bag for subsequent decontamination.

If inhaled: Negligible or unlikely exposure pathways.

Remove to fresh air.

Consult a physician if necessary.

Skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Seek medical advice.

Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical advice.

Ingestion: Do not induce vomiting without medical advice.

If victim is conscious:

Rinse mouth with water.

Do not give anything to drink.

Keep at rest.

Do not leave the victim unattended.

Vomiting may occur spontaneously

Risk of product entering the lungs on vomiting after ingestion.

Lay victim on side.

Seek medical advice.

Most important symptoms and effects, both acute and delayed

Risks: Skin contact may aggravate existing skin disease

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

Indication of any immediate medical attention and special treatment needed

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

Treat symptomatically.

There is no specific antidote available.

5. Fire-fighting Measures

Flash point: >156 °F (69 °C)

closed cup

Flammability class: Combustible

Autoignition temperature: no data available

Flammability / Explosive limit: Lower flammability/explosion limit : 1.10 %(V)

Upper flammability/explosion limit: 19.00 %(V)

Extinguishing media

Suitable extinguishing media: Extinguishing media - small fires

Dry chemical

Carbon dioxide (CO₂)

Extinguishing media - large fires

Foam

Water spray

Unsuitable extinguishing media: High volume water jet
(frothing possible)

Special hazards arising from the substance or mixture

Specific hazards during fire fighting: Under fire conditions:

Will burn

(following evaporation of water)

Vapors may spread long distances and ignite.

Hazardous decomposition products formed under fire conditions.

Carbon oxides

Sulfur oxides

Nitrogen oxides (NO_x)

Advice for firefighters

Special protective equipment for fire-fighters: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

For further information refer to section 8 "Exposure controls / personal protection."

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Take all necessary measures to avoid accidental discharge of products into drains and waterways

due to the rupture of containers or transfer systems.

Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

Methods and materials for containment and cleaning up

Prohibition: Use only non-sparking tools.

Methods for containment: Stop leak if safe to do so. Dam up with sand or inert earth (do not use combustible materials).

Recovery: Soak up with inert absorbent material. Shovel or sweep up. Keep in suitable, closed containers for disposal. Never return spills in original containers for re-use.

Decontamination / cleaning: Clean contaminated surface thoroughly. Flush with plenty of water. Recover the cleaning water for subsequent disposal. Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal: Dispose of in accordance with all applicable regulations.

7. Handling and Storage Information

Handling: This product must only be handled by specifically trained employees. Do not use sparking tools. Avoid contact with skin and eyes. Do not ingest. Avoid inhalation of vapor or mist. Ensure all equipment is electrically grounded before beginning transfer operations. Wash hands after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage: Store in original container. Keep containers tightly closed in a dry and well ventilated place. Store locked up. Do not allow product to freeze. Keep away from heat/sparks/open flames/hot surfaces and sources of ignition. Do not mix with incompatible materials. Store above 39°F. Do not allow water or other chemicals to be introduced into contents of container. Do not contaminate water sources with equipment wash water, spray disposal wastes or by cleaning of equipment. Do not store near feed or food or consumer products.

8. Exposure Controls / Personal Protection Information

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 Considerations.

Ingredients with workplace control parameters

Ingredients	Value type	Value	Basis
Ethylene Glycol Monobutyl Ether	TWA	5 ppm 24 mg/m3	NIOSH
	Potential for dermal absorption		
Ethylene Glycol Monobutyl Ether	TWA	20 ppm	ACGIH
	Upper Respiratory Tract irritation, Eye irritation, Substances for which there is a Biological Exposure Index or Indices (see BEI® section), Confirmed animal carcinogen with unknown relevance to humans		
Ethylene Glycol Monobutyl Ether	TWA	50 ppm 240 mg/m3	OSHA Z-1
	Skin designation, The value in mg/m3 is approximate.		
Ethylene Glycol Monobutyl Ether	TWA	25 ppm 120 mg/m3	OSHA Z-1-A
	Skin notation		
Ethanol	TWA	1,000 ppm 1,900 mg/m3	NIOSH
Ethanol	TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
	The value in mg/m3 is approximate.		
Ethanol	TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1-A
Ethanol	STEL	1,000 ppm	ACGIH
	Upper Respiratory Tract irritation, Confirmed animal carcinogen with unknown relevance to humans		
Polyethylene Glycol	TWA	10 mg/m3	WEEL
	Form of exposure : aerosol		
NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations)			
Ingredients	CAS-No.	Concentration	

Ethylene Glycol Monobutyl Ether	111-76-2	700 ppm	
Ethanol	64-17-5	3300 ppm	
Biological Exposure Indices			
Ingredients	Value type	Value	Basis
Ethylene Glycol Monobutyl Ether	BEI	Butoxyacetic acid (BAA) Urine	ACGIH
		End of shift (As soon as possible after exposure ceases)	

Engineering Measures:

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: Effective exhaust ventilation system.

Personal Protective Equipment (PPE):

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.

Hand protection:

Recommended preventive skin protection: Gloves

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye 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 use of:

Safety glasses with side-shields

Face-shield

Skin and body protection:

Recommended preventive skin protection. Footwear protecting against chemicals impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures:

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

- 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 material.

Protective measures:

Ensure that eyewash stations and safety showers are close to the workstation location. Emergency equipment immediately accessible, with instructions for use. Use non-sparking tools only. The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

9. Physical Chemical Properties Information

Appearance:

Form: viscous Physical state: liquid Color: clear Odor: odorless

Odor Threshold: no data available

pH: 6.5 - 8.0 (1 % (m/v))

Freezing point: < 30 °F (-1 °C)

Boiling point/boiling range: > 212 °F (100 °C) (760 mmHg (1,013.25 hPa))

Flash point: > 156 °F (69 °C) closed cup

Flammability class: Combustible

Evaporation rate (Butylacetate = 1): no data available

Flammability (solid, gas): no data available

Flammability (liquids): no data available

Flammability / Explosive limit: Lower flammability/explosion limit: 1.10 %(V)

Upper flammability/explosion limit: 19.00 %(V)

Autoignition temperature: no data available

Vapor pressure: < 23.5 mmHg (31.33 hPa) (77 °F (25 °C))

Vapor density: no data available

Density: 1 - 1.04 g/cm³ (77 °F (25 °C))

Solubility: Water solubility: soluble

Partition coefficient: n-octanol/water: no data available

Thermal decomposition: no data available

Viscosity: Viscosity, dynamic: 50 mPa.s (77 °F (25 °C))

Explosive properties: no data available

Oxidizing properties: no data available

Other information

Volatiles by Volume: < 61 %

10. Stability and Reactivity Information

Reactivity

No data available

Chemical stability

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions

Polymerization: Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid: Keep away from heat and sources of ignition.

Keep away from flames and sparks.

Incompatible materials

Materials to avoid: Strong reducing agents

Strong oxidizing agents

Hazardous decomposition products

Decomposition products: Carbon oxides

Sulfur oxides

Nitrogen oxides (NO_x)

11. Toxicological Information

Acute toxicity

Acute oral toxicity: Not classified as harmful if swallowed According to the data on the components According to the classification criteria for mixtures.

Acute inhalation toxicity: Not classified as harmful by inhalation According to the data on the components According to the classification criteria for mixtures.

Acute dermal toxicity: Not classified as harmful by contact with skin According to the data on the components According to the classification criteria for mixtures.

Acute toxicity (other routes of administration): no data available

Skin corrosion/irritation

Skin irritation: Irritating to the skin.

According to the data on the components According to the classification criteria for mixtures

Active ingredient

Serious eye damage/eye irritation

Eye irritation: Risk of serious damage to eyes.

According to the data on the components According to the classification criteria for mixtures.

Respiratory or skin sensitization

Sensitization: Not classified as sensitizing by skin contact According to the data on the components According to the classification criteria for mixtures.

Mutagenicity

Genotoxicity in vitro: Product is not considered to be genotoxic According to the data on the components. According to the classification criteria for mixtures.

Genotoxicity in vivo: Product is not considered to be genotoxic According to the data on the components. According to the classification criteria for mixtures.

Carcinogenicity

Carcinogenicity: The product is not considered carcinogenic.

Ingredients	CAS-No.	Rating	Basis
Ethylene Glycol Monobutyl Ether	111-76-2	Confirmed animal carcinogen with unknown relevance to humans.	ACGIH
Ethanol	64-17-5	Confirmed animal carcinogen with unknown relevance to humans.	ACGIH

This product does not contain any ingredient designated as probable or suspected human carcinogens by: NTP, IARC, OSHA, ACGIH

Toxicity for reproduction and development

Toxicity to reproduction / fertility: According to the data on the components. The product is not considered to affect fertility.

According to the classification criteria for mixtures

Developmental Toxicity/Teratogenicity: According to the data on the components. The product is not considered to be toxic for development. The product is not considered to be teratogenic. According to the classification criteria for mixtures.

STOT

STOT-single exposure: no data available

STOT-repeated exposure: no data available

Aspiration toxicity: no data available

12. Ecological Information

Ecotoxicity assessment

Acute aquatic toxicity: According to the data on the components

Toxic to aquatic life.

According to the classification criteria for mixtures.

Chronic aquatic toxicity: According to the data on the components

Harmful to aquatic life with long lasting effects.

According to the classification criteria for mixtures.

Biodegradability

Biodegradability: Inherently biodegradable.

13. Disposal Information

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

This product is NOT an EPA hazardous waste.

Rinse with an appropriate solvent.

Dispose of contents/container in accordance with local regulation.

14. Transport Information

Transportation status: IMPORTANT! Statements below provide additional 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.

DOT

UN number NA 1993

Dangerous Good Description NA 1993 COMBUSTIBLE LIQUID, N.O.S. (ETHANOL, 2-BUTOXYETHANOL), III

Transport hazard class Combustible liquid.

Packing group

Packing group III

ERG No 128

Environmental hazards**Marine pollutant**

NO

Special precautions for user

Remarks: The combustible liquid classification only applies when shipped in package sizes >119 gallons.

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

15. Regulatory Information

Notification status

United States TSCA Inventory: YES (positive listing)

Canadian Domestic Substances List (DSL): YES (positive listing)

All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS): YES (positive listing)

On the inventory, or in compliance with the inventory

Japan. CSCL - Inventory of Existing and New Chemical Substances: n (Negative listing)

Not in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI): n (Negative listing)

Not in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC): YES (positive listing)

On the inventory, or in compliance with the inventory

Federal Regulations**SARA 311/312 Hazards**

Fire Hazard yes

Reactivity Hazard no

Sudden Release of Pressure Hazard no

Acute Health Hazard yes

Chronic Health Hazard no

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313: Ethylene Glycol Monobutyl Ether 111-76-2 12.5 %

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA - Emergency Planning and Community Right-to-Know**CERCLA Reportable Quantity**

Ingredients	CAS-No.	Reportable quantity
1,4-Dioxane	123-91-1	100 lb
Ethylene Oxide	75-21-8	10 lb
Diethanolamine	111-42-2	100 lb

SARA 304 Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide		75-21-8 10 lb
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb

SARA 302 Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide		75-21-8 10 lb
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb

16. Other Information

Date Prepared: 5/19/2015

NFPA-Classification

Health : 2 moderate

Flammability : 2 moderate

Instability or Reactivity : 0 minimal

HMIS-Classification

Health : 2 moderate

Flammability : 2 moderate

Reactivity : 0 minimal

Further information

Further information : Product classified under the US GHS format.

Key or legend to abbreviations and acronyms used in the safety data sheet

STEL : Short-term exposure limit

TWA : 8-hr TWA

ACGIH : American Conference of Governmental Industrial Hygienists

OSHA : Occupational Safety and Health Administration

WHMIS : Workplace Hazardous Materials Information System

NTP : National Toxicology Program

IARC : International Agency for Research on Cancer

SAEL : Solvay Acceptable Exposure Limit

NIOSH : National Institute for Occupational Safety and Health
NFPA : National Fire Protection Association
HMIS : Hazardous Materials Identification System (Paint & Coating)

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.