

MATERIAL SAFETY DATA SHEET

SURFACTANT 90/10

MSDS DATE: 6/16/09
SUPERSEDES: NONE

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SURFACTANT 90/10
MANUFACTURER: Reed & Perrine
ADDRESS: P.O. Box 100, Main Street, Tenment, NJ 07763
CHEMTREC PHONE: US: 1-800-424-9300 International: 1-202-483-7616
CHEMICAL NAME: Proprietary blend
CHEMICAL FAMILY: Surfactant blend
CHEMICAL FORMULA: Mixture
PRODUCT USE: Agricultural surfactant
SECTION 1 NOTES: None

SECTION 2: HAZARDOUS INGREDIENTS

| INGREDIENT | CAS NO. | % WT/% VOL | SARA 313 REPORTABLE | TWA | OSHA STEL | Ceiling | TWA | OSHA STEL | ACGIH STEL |
|----------------|---------|------------|----------------------|-----|-----------|---------|-----|-----------|------------|
| Ethylene Oxide | 75-21-8 | <1 ppm | Not at level present | | 1 ppm TLV | | | 1 ppm TLV | 1 ppm TLV |

SECTION 2 NOTES: None

SECTION 3: HAZARDS IDENTIFICATION

ROUTES OF ENTRY: Eyes, skin, ingestion, inhalation

POTENTIAL HEALTH EFFECTS

EYES: May cause eye irritation.

SKIN: Prolonged contact may cause irritation to skin with local redness on skin.

INGESTION: May cause abdominal discomfort.

INHALATION: Avoid breathing vapors or spray mist. Aspiration may occur during swallowing, resulting in lung damage.

ACUTE HEALTH HAZARDS: None beyond those described above

CHRONIC HEALTH HAZARDS: None known

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known

CARCINOGENICITY

OSHA: No ACGIH: No NTP: No IARC: No OTHER: No

SECTION 3 NOTES: None

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SECTION 4: FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Have the product container with you when calling a poison control center or doctor, or going for treatment.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

If Swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: None

SECTION 4 NOTES: None

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: Unknown
(% BY VOLUME) LOWER: Unknown

FLASH POINT:

F: >200
C: >93
PMCC

METHOD USED:

AUTOIGNITION TEMPERATURE:

F: Unknown
C: Unknown

NFPA HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 OTHER: -

EXTINGUISHING MEDIA:

Use National fire protection association Class B extinguishers (Carbon dioxide, water fog, dry chemical or foam). Water may also be used.

SPECIAL FIRE FIGHTING PROCEDURES:

Cool fire exposed containers with water. Wear NIOSH/OSHA approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

HAZARDOUS DECOMPOSITION PRODUCTS:

When exposed to fire conditions, oxides of carbon will be released

SECTION 5 NOTES: None

MATERIAL SAFETY DATA SHEET
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SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

For small spills, dike and absorb with inert material. Use emergency response professionals if managing a release is beyond the capability of in-house personnel.

SECTION 6 NOTES:

None

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in a cool, dry place. Keep container tightly closed. Keep away from heat, sparks and flame. Do not use with aluminum equipment at temperatures above 49 °C (120 °F).

SECTION 7 NOTES:

None

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION :

Where employees may be exposed, provide general dilution or local exhaust ventilation in volume and pattern to keep level of hazardous ingredient in Section 2 below recommended (ACGIH TLV) or regulate C (OSHA PEL) limit. Where employees will not be exposed, keep level below 25% of LEL in Sect. 2.

RESPIRATORY PROTECTION:

Not required under normal operating conditions. If ventilation is not adequate, use respirator with organic vapor cartridge.

EYE PROTECTION:

Chemical goggles

SKIN PROTECTION:

Avoid skin contact by use of other protective clothing such as rubber gloves and apron, long sleeves, etc.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A safety shower, an eyewash station and washing facilities should be available.

WORK HYGIENIC PRACTICES:

None

EXPOSURE GUIDELINES:

See section 2

SECTION 8 NOTES:

Do not take internally. Prevent contact with contaminated clothing. Wash contaminated clothing before reuse.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Yellow, slightly hazy

ODOR: Mild characteristic

PHYSICAL STATE: Liquid

PH AS SUPPLIED: Not applicable
pH (Other): Unknown

BOILING POINT:

F: Unknown
C: Unknown

MELTING POINT:

F: Unknown
C: Unknown

FREEZING POINT:

F: Unknown
C: Unknown

VAPOR PRESSURE (mmHg):

@ Unknown

VAPOR DENSITY (AIR = 1):

@ Unknown

SPECIFIC GRAVITY (H₂O = 1):

@ ~1.03

F: 68

C: 20

EVAPORATION RATE:

Should be slower than basis

BASIS (butyl acetate=1):

SOLUBILITY IN WATER: Soluble

VISCOSITY:

@ Unknown

F:

C:

SECTION 9 NOTES: None

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

Stable

Unstable

CONDITIONS TO AVOID (STABILITY):

Avoid extremely high heat or open flame directly applied

INCOMPATIBILITY (MATERIAL TO AVOID):

Do not use with aluminum equipment at temperatures above 49 °C (120 °F).

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

None known except under fire conditions. See section 5.

HAZARDOUS POLYMERIZATION:

Will not occur

CONDITIONS TO AVOID (POLYMERIZATION):

None known

SECTION 10 NOTES:

None

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Not available

SECTION 11 NOTES:

None

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SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Not available

SECTION 12 NOTES: None

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

This material is not classified as an ignitable hazardous waste according to federal regulations. Check with your state environmental agency to determine if this material is regulated in any way. No disposal method should be used which would pose an environmental or human health threat including any which would contaminate ground or surface waters.

RCRA HAZARD CLASS: Not regulated

SECTION 13 NOTES: None

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Not regulated
HAZARD CLASS: Not regulated
ID NUMBER: Not regulated
PACKING GROUP: Not regulated
LABEL STATEMENT: Not regulated

OTHER AGENCIES: Not regulated

SECTION 14 NOTES: None

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT):

All components of this product are listed or excluded from listing on the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

| Chemical Name | CAS Number | Range in % | RQ |
|---|------------|------------|----|
| Glycol ethers (fraction of product matching EPA definition) | Mixture | 0.5-1.5 | 1 |
| Residual ethylene oxide (typical) | 75-21-8 | <0.001 | 10 |

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

Section 302/304 Extremely Hazardous Substances

| Chemical Name | CAS Number | Range in % | TPQ | RQ |
|-----------------------------------|------------|------------|---------------------------------|----|
| Residual ethylene oxide (typical) | 75-21-8 | <0.001 | Below reportable concentrations | |

311/312 HAZARD CATEGORIES:

This product has been reviewed according to the EPA "Hazard Categories", promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard

313 REPORTABLE INGREDIENTS:

| CAS Number | Chemical Name | Concentration |
|------------|---|---------------|
| Mixture | Glycol ethers (fraction of product matching EPA definition) | 0.5-1.5 |

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SECTION 15: REGULATORY INFORMATION - CONTINUED

STATE REGULATIONS:

WARNING! This product contains a detectable amount of ethylene oxide, which is known to the State of California to cause cancer and/or reproductive toxicity.

Ethoxylated products may contain residual amounts of ethylene oxide (EO) (< 1 ppm) which can accumulate in the container headspace and be released into the ambient environment. This process is enhanced when the product is agitated, as during tank car loading and unloading, and blending operations. Ethylene oxide causes tumors in laboratory animals. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Level (PEL) for EO is 1 ppm for an eight-hour time weighted average exposure. The standard regulates occupational exposure to EO from all sources, including products containing residual EO. It is the responsibility of the employer to comply with OSHA ethylene oxide standard (29 CFR 1910.1047)

SECTION 15 NOTES:

None

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

None

PREPARATION INFORMATION:

Prepared on 6/16/09

DISCLAIMER:

The recommendation for safe handling and protection procedures is believed to be generally suitable for the standard uses of this compound. However, each user should identify his intended uses of this material and determine whether they are appropriate. All data included in this document is released as typical values and should not be utilized to determine the suitability of this material for a particular use or purpose. No warranty, either expressed or implied, is hereby made, nor do we give permission, inducement, or recommendations to practice any patented invention without a license. All data is offered for consideration, investigation and verification purposes only.

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