



SAFETY DATA SHEET

Conforms to the requirements of the United States Hazard Communication regulation 29 CFR 1910.1200

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

| | |
|---------------------|---|
| PRODUCT NAME | EMAL 270D |
| PRODUCT CASRN | 68585-34-2 |
| PRODUCT DESCRIPTION | FATTY ALCOHOLS, ETHOXYLATED, SULFATE SALT |
| SDS DOCUMENT No. | K92862 |
| RECOMMENDED USES | This product is intended for use as a surface-active agent in industrial and commercial applications. |

RESPONSIBLE PARTY

Kao Specialties Americas LLC
243 Woodbine Street
P. O. Box 2316
High Point, NC 27261
Telephone: 1-800-727-2214

Refer to SECTION 16 for information regarding the
MANUFACTURER(s) of this product

FOR ALL TRANSPORTATION ACCIDENTS, call Chemtrec at 800-424-9300 or 703-527-3887 for international collect calls.

SECTION 2: HAZARD(S) IDENTIFICATION

PRODUCT CLASSIFICATION per 29 CFR 1910.1200

| | |
|-----------------------|--|
| HAZARD CLASSIFICATION | Serious Eye Damage/Eye Irritation Category 1 Skin Corrosion/Irritation Category 2 |
| SIGNAL WORD | Danger |
| HAZARD STATEMENTS | Causes skin irritation. Causes serious eye damage. |

**HAZARD
PICTOGRAMS**



RECOMMENDED SAFETY PRECAUTIONS

| | |
|---------------------------|---|
| INJURY PREVENTION | Wash thoroughly after handling. Wear chemical-resistant gloves and clothing, eye protection and face protection. |
| EMERGENCY RESPONSE | IF ON SKIN: Wash with plenty of soap and water. 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. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. |
| PRODUCT STORAGE | The storage area must be protected by properly designed containment to prevent the release of product to groundwater or sewers. Keep container tightly closed when not in use. Store in a well ventilated area. |
| PRODUCT DISPOSAL | DISPOSE of product and containers in accordance with all applicable local, state, federal, and international regulations. |

HAZARDS NOT OTHERWISE CLASSIFIED

| | |
|---------------------------|----------------|
| PYROPHORIC GASES | Not applicable |
| SIMPLE ASPHYXIANTS | Not applicable |
| COMBUSTIBLE DUST | Not applicable |

| Dust Classification | Minimum Ignition Energy (mJ) | Pmax (bar-g) | Rmax (bar/s) | Kst (bar-m/s) | Explosion Severity |
|---------------------|------------------------------|--------------|--------------|---------------|--------------------|
| Not Applicable | | | | | |

Definitions for dust classifications are found in OSHA Instruction CPL 03-00-008 *Combustible Dust National Emphasis Program (reissued)* March 11, 2008, Appendix E, Section 5

| | |
|----------------------------|------|
| Other Known Hazards | None |
|----------------------------|------|

FOR INFORMATION REGARDING ENVIRONMENTAL GHS CLASSIFICATION, REFER TO SECTION 12 BELOW

SECTION 3: COMPOSITION/INFORMATION on INGREDIENTS

| Chemical Name | Common Name | CAS Number | Concentration (%) |
|--|--|------------|-------------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-hy droxy-, C10-16-alkyl ethers, sodium salts | POE (2) alkyl (C10-16) ethers, sodium sulfate salt | 68585-34-2 | 65 - 75 |

If any items in the table above are described as CONFIDENTIAL, Kao Specialties Americas LLC considers this information to constitute a Trade Secret.

SECTION 4: FIRST-AID MEASURES

| | |
|----------------------|---|
| EYES | Immediately flush eyes with plenty of water for at least 15 minutes. If necessary, seek medical attention. |
| SKIN | For skin contact, wash immediately with soap and water. If necessary, seek medical attention. |
| INGESTION | If the material is swallowed, get immediate medical attention or advice. |
| INHALATION | If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. |
| SYMPTOMS of EXPOSURE | None known. |
| NOTES to PHYSICIAN | Provide general supportive measures and treat symptomatically. |

SECTION 5: FIRE-FIGHTING MEASURES

| | |
|---|--|
| FLAMMABLE PROPERTIES | Refer to SECTION 9: Physical and Chemical Properties |
| HAZARDOUS PRODUCTS of COMBUSTION | Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. |
| PROPERTIES THAT COULD INCREASE FIRE or EXPLOSION HAZARD | No known hazards. |
| EXTINGUISHING MEDIA | Powder, alcohol-resistant foam, CO2 & sand |
| FIRE-FIGHTING INSTRUCTIONS | Firefighters should wear full protective clothing including self contained breathing apparatus. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, call Chemtrec at 800-424-9300 or 703-527-3887 for international collect calls.

RESPONSE TO SMALL SPILLS OF PRODUCT

| | |
|---------------------------------|--|
| SPILL CONTAINMENT | Stop the flow of material, if this is without risk. Contain the discharged material. |
| SPILL CLEANUP PROCEDURES | Absorb spill with inert material. Shovel material into appropriate container for disposal. |
| REQUIRED EQUIPMENT | Shovel the material into waste container. |
| ADDITIONAL INFORMATION | No other spill procedures necessary. |

RESPONSE TO LARGE SPILLS OF PRODUCT

| | |
|---------------------------------|---|
| SPILL CONTAINMENT | Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent liquid from entering sewers. Keep out of drains and water courses. |
| SPILL CLEANUP PROCEDURES | Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear appropriate protective equipment and clothing during clean-up. Thoroughly wash the area with water after a spill or leak clean-up. Dispose of spent absorbent in an approved industrial waste landfill. |
| REQUIRED EQUIPMENT | No additional information on equipment. |
| ADDITIONAL INFORMATION | Surfaces may become slippery after spillage. Have emergency equipment readily available. Remove soiled clothing and laundry before reuse. |

SECTION 7: HANDLING AND STORAGE

| | |
|------------------------------|--|
| HANDLING REQUIREMENTS | As with all chemicals, good industrial hygiene practices should be followed when handling this material. Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. Empty drums should be completely drained, properly banded and promptly returned to a drum reconditioner, or promptly disposed of. |
| STORAGE REQUIREMENTS | Do not store this material in open or unlabeled containers. To protect purity, store under dry nitrogen gas. |

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

Wear chemical goggles.

HAND PROTECTION

Use impervious gloves.

SKIN PROTECTION

Normal work clothing (long sleeved shirts and long pants) is recommended.

RESPIRATORY PROTECTION

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever there may be potential for airborne exposure.

OTHER

Eyewash fountains and emergency showers are required.

EXPOSURE LIMITS

| CHEMICAL | CASRN | PERCENT | LIMITS | AGENCY |
|---|-------|---------|--------|--------|
| OSHA: No exposure limits established for this product | | | | |
| ACGIH: No exposure limits established for this product | | | | |

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

| | | | |
|--|----------------------------|---------------------------|--------------------------------|
| APPEARANCE @ 20°C | Pale yellow viscous liquid | ODOR | Slightly characteristic odor |
| ODOR THRESHOLD | No data available | pH | 7.0 - 9.0 (1% solution @ 20°C) |
| VAPOR DENSITY | No data available | VAPOR PRESSURE | No data available |
| EVAPORATION RATE | No data available | RELATIVE DENSITY | 1.1g/mL @ 30°C |
| MELTING POINT (°C) | 3°C - 8°C | WATER SOLUBILITY | Soluble |
| INITIAL BOILING POINT (°C) | No data available | BOILING RANGE (°C) | No data available |
| PARTITION COEFFICIENT (N-OCTANOL/WATER) | No data available | VISCOSITY | 20,000 mPa-s @ 20°C |

| | | | |
|----------------------------------|-------------------|------------------------------------|-------------------|
| DECOMPOSITION TEMPERATURE | No data available | FLAMMABILITY CLASSIFICATION | Not evaluated |
| FLASH POINT (°C) | Not applicable | AUTO-IGNITION TEMPERATURE | No data available |
| UPPER EXPLOSIVE LIMIT | No data available | LOWER EXPLOSIVE LIMIT | No data available |

SECTION 10: STABILITY and REACTIVITY

CHEMICAL STABILITY | Stable under normal conditions.

CONDITIONS to AVOID | None known

INCOMPATIBLE MATERIALS (Reactivity) | None known.

INCOMPATIBLE MATERIALS (Storage & Transport) | No information available.

HAZARDOUS DECOMPOSITION PRODUCTS | None known.

HAZARDOUS POLYMERIZATION | Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

EYE EFFECTS | This product is severely irritating to the eyes.

SKIN EFFECTS | Prolonged and/or repeated skin contact may result in mild irritation or redness.

ACUTE ORAL EFFECTS (INGESTION) | Not a likely route of entry.

ACUTE INHALATION EFFECTS | This product may cause slight irritation to the respiratory system.

TARGET ORGANS | No known effects.

CHRONIC EFFECTS

MUTAGENICITY | Ames Test (Salmonella typhimurium): Negative

TERATOLOGY | No data available for this product.

**REPRODUCTIVE and
DEVELOPMENTAL
TOXICITY** | No information available.

CARCINOGENICITY

| CHEMICAL NAME | DATA | AGENCY | LIST |
|---|------|--------|------|
| None of the components of this product are listed on the OSHA Possible or Select Carcinogens Lists. | | | |
| None of the components of this product are listed on the ACGIH Carcinogens List. | | | |
| No limits established for this product by the International Agency for Research on Cancer (IARC). | | | |
| None of the components of this product are listed on the NTP Known or Suspected Carcinogens List. | | | |

LETHAL DOSE (LD50 & LC50) DATA

LD50 ORAL | LD50 Oral Rat > 2000 mg/kg

No information available for this product.

**MEDICAL
CONDITIONS
AGGRAVATED by
EXPOSURE** | No information available.

ROUTES of ENTRY | Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

**OTHER
TOXICOLOGICAL
INFORMATION** | Skin Corrosion/Irritation (ingredients): Sodium polyoxyethylene(2) alkyl(C10-16) ethers sulfates: Category 2
Eye Damage/Irritation (ingredients): Sodium polyoxyethylene(2) alkyl(C10-16) ethers sulfates: Category 1
Skin Sensitizer: OECD 406 (Guinea pig): negative

SECTION 12: ECOLOGICAL INFORMATION

UN GHS AQUATIC TOXICITY CLASSIFICATION INFORMATION

| | |
|--|---|
| AQUATIC TOXICITY CLASSIFICATION | Acute 2 Chronic 3 |
| SIGNAL WORD | Not applicable |
| HAZARD PICTOGRAM | Not applicable |
| HAZARD STATEMENT | Toxic to aquatic life. Harmful to aquatic life with long lasting effects. |
| PREVENTION | Avoid release to the environment. |
| RESPONSE | Not applicable |
| DISPOSAL | Dispose of contents and container in accordance with local, national, and international regulations for hazardous wastes. |

ADDITIONAL ENVIRONMENTAL INFORMATION

| | |
|---|---|
| AQUATIC TOXICITY (fish) | 96 hr LC50 > 1 mg/L |
| ECOTOXICITY INFORMATION | None determined |
| ENVIRONMENTAL FATE | This product is Readily Biodegradable. |
| BIOLOGICAL OXYGEN DEMAND (BOD5), g/g | No data available |
| CHEMICAL OXYGEN DEMAND (COD), g/g | No data available |
| PERSISTENCE & DEGRADABILITY | CO2 evolution test (OECD301B) : 81% (28days)(Data on similar product) Biodegradation test using activated sludge of a municipal sewage treatment plant : % degradation by BOD : 91.5% (Data on similar product) % degradation by DOC : 97.5% (Data on similar product) |
| BIOACCUMULATION | No information available |

SECTION 13: DISPOSAL CONSIDERATIONS

| | |
|--------------------------|---|
| WASTE DESCRIPTION | Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. |
|--------------------------|---|

| | |
|--|---|
| GENERAL DISPOSAL CONSIDERATIONS | Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations. |
| DISPOSAL of EMPTY CONTAINERS | Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. |

| RCRA COMPONENT | CASRN | DATA |
|---|-------|------|
| No limits established for this product. | | |

SECTION 14: TRANSPORT INFORMATION

| | US DOT | IATA | IMDG |
|-----------------------------------|------------------------|------------------------|------------------------|
| UN NUMBER | Not applicable | Not applicable | Not applicable |
| UN PROPER SHIPPING NAME | Non-hazardous material | Non-hazardous material | Non-hazardous material |
| TRANSPORT HAZARD CLASS(ES) | Not applicable | Not applicable | Not applicable |
| PACKING GROUP | Not applicable | Not applicable | Not applicable |

REPORTABLE QUANTITY (RQ) | No reportable quantity for this product

EMERGENCY RESPONSE GUIDEBOOK (ERG) REFERENCE | Not applicable

MARINE POLLUTANT | None

SECTION 15: REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA) | This product is listed on the U.S. EPA TSCA Inventory.

EXPORT NOTIFICATIONS | This product is not subject to TSCA 12B Export Notification requirements.

SIGNIFICANT NEW USE RULE (SNUR) | This material is not subject to a Significant New Use Rule under the US Toxic Substances Control Act.

INTERNATIONAL CHEMICAL INVENTORIES

All of the components of this product are listed on the following inventories:

| | | |
|---------------|-------------|---------------|
| DSL | Canada | Yes |
| NDSL | Canada | No |
| ENCS | Japan | Yes |
| EINECS | Europe | Yes |
| ELINCS | Europe | No |
| IECSC | China | Yes |
| PICCS | Philippines | Yes |
| ECL | Korea | Yes |
| AICS | Australia | Yes |
| TCSI | Taiwan | Not evaluated |

EMERGENCY PLANNING and COMMUNITY RIGHT TO KNOW ACT (EPCRA)**40 CFR PART 355, APPENDIX A**

| EHS COMPONENTS | CASRN | PERCENT | TPQ POUNDS and RQ |
|---|--------------|----------------|--------------------------|
| No limits established for this product. | | | |

| 313 COMPONENTS | CASRN | PERCENT | REPORTING LIMIT |
|---|--------------|----------------|------------------------|
| No limits established for this product. | | | |

| CERCLA/SARA COMPONENTS | CASRN | PERCENT | REPORTING LIMIT |
|---|--------------|----------------|------------------------|
| No limits established for this product. | | | |

| | | |
|---|-----------------|-----|
| EPCRA SECTION 311/312 CLASSIFICATION | ACUTE | Yes |
| | CHRONIC | No |
| | FIRE | No |
| | PRESSURE | No |
| | REACTIVE | No |

OTHER FEDERAL REGULATIONS

The following components are identified under the Clean Air Act HON-Rule for SOCM chemicals:

| COMPONENT NAME | CASRN |
|-------------------------|--------------|
| No regulated components | |

The following components are identified under the Clean Air Act (VOCs in SOCM chemicals):

| COMPONENT NAME | CASRN |
|-----------------------|--------------|
|-----------------------|--------------|

| | |
|-------------------------|--|
| No regulated components | |
|-------------------------|--|

The following components are identified under the Clean Air Act as Hazardous Air Pollutants (HAP)

| COMPONENT NAME | CASRN |
|-------------------------|-------|
| No regulated components | |

The following components are identified under the Clean Air Act HON-Rule Hazardous Air Pollutants (HAP)

| COMPONENT NAME | CASRN |
|-------------------------|-------|
| No regulated components | |

The following components are identified under the Clean Water Act:

| COMPONENT NAME | CASRN | LIST NAME |
|---|-------|-----------|
| No limits established for this product. | | |

STATE RIGHT-TO-KNOW INFORMATION:

| COMPONENT NAME | CASRN | STATE | List Name |
|--|-------|-------|-----------|
| <i>If the STATE RIGHT-TO-KNOW INFORMATION table above is empty than none of the components of this product are included on the state right-to-know regulatory lists for Florida, Massachusetts, Michigan, Pennsylvania, or New Jersey.</i> | | | |

CALIFORNIA SAFE WATER and TOXIC ENFORCEMENT ACT of 1986 (Proposition 65)

| COMPONENT NAME | CASRN | CONCENTRATION [‡] | LIST DATA |
|----------------|-------|----------------------------|-----------|
|----------------|-------|----------------------------|-----------|

[‡] CONCENTRATIONS EXPRESSED IN % UNLESS UNITS ARE SPECIFIED

SECTION 16: OTHER INFORMATION

To the best of the manufacturer's knowledge, the information contained herein is accurate. However, neither the manufacturer, nor any of its affiliates, make any representations or warranties (expressed or implied), nor assumes any liability (including liability for any direct, incidental, consequential, or other damages) with respect to the accuracy or completeness of the information contained herein. Such information may be (without limitation) invalid if the specified material is used in combination with another, in a particular process, or under unusual conditions. Determination of suitability of any material for any given purpose is the sole responsibility of the user who assumes all risk and responsibility therefore. All materials may present unknown hazards and should be used with appropriate caution. The manufacturer cannot and does not guarantee that the hazards described herein are the only ones that exist.

SDS GENERATED BY

HAZEMS

| | |
|-------------------------|--|
| SDS VERSION DATE | 12/14/2015 6:21:41 PM |
| SDS APPROVED BY | Patrick B. Simcox Manager – Health, Safety, & Environmental e-mail: psimcox@ksallc.com |

| | |
|------------------------|--|
| MANUFACTURER(S) | KAO CHEMICALS GmbH Kupferstrasse 1, D-46446 Emmerich 1, GERMANY Phone: 011-49-2822-7110 |
|------------------------|--|

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD RATINGS

| | |
|---------------------|---|
| HEALTH | 3 |
| FLAMMABILITY | 1 |
| REACTIVITY | 0 |

Hazardous Material Identification System (HMIS) Hazard Ratings

| | |
|----------------------------|---|
| HEALTH | 3 |
| FLAMMABILITY | 1 |
| REACTIVITY | 0 |
| PERSONAL PROTECTION | D |

The following components of this product are listed on the Canadian WHMIS Ingredient Disclosure List (IDL):

| COMPONENT | CASRN | PERCENT | MINIMUM CONCENTRATION |
|-----------|-------|---------|-----------------------|
|-----------|-------|---------|-----------------------|

No regulatory limits established for this product.

END OF DOCUMENT