**Safety Data Sheet dated 29/5/2015, version 2**

**Printing date:18/8/2016**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: EMULAM RM 3

MSDS code: F097100

Chemical description: Product based on fatty acids derivatives in fuel oil.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

Industrial uses.

1.3. Details of the supplier of the safety data sheet

Supplier:

Lamberti USA Inc. - Highway 59 at County Road 212 - P.O. Box 1000, Hungerford, TX 77448-U.S.A.

Tel. n° 281 342-5675 Fax n° 979 532-3749

Competent person responsible for the safety data sheet:

hse@lamberti.com

1.4. Emergency telephone number

CHEMTREC - Phone n. 800 424-9300

## SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Following GHS and within the meaning of 29 CFR 1910.1200 (OSHA)

Warning, Flam. Liq. 4, Combustible liquid.

Danger, Eye Dam. 1, Causes serious eye damage.

Warning, Carc. 2, Suspected of causing cancer.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Symbols:

Danger

Hazard statements:

H227 Combustible liquid.

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

Precautionary statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER/doctor.

P314 Get medical advice/attention if you feel unwell.

P370+P378 In case of fire: Use Water and Carbon dioxide (CO2) to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

## SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous substance/components within GHS Classification and the meaning of EEC directive 67/548 and CLP regulation and related classification

>= 20% - < 35% 2-(2-(2-butoxyethoxy)ethoxy)ethanol.

REACH No.: Not available, Index number: 603-183-00-0, CAS: 143-22-6, EC: 205-592-6


A.3/1 Eye Dam. 1 H318

>= 15% - < 30% Fuel oil, no. 2

Index number: 649-225-00-1, CAS: 68476-30-2, EC: 270-671-4


A.10/1 Asp. Tox. 1 H304


A.6/2 Carc. 2 H351

>= 1% - < 10% Propylene carbonate

Index number: 607-194-00-1, CAS: 108-32-7, EC: 203-572-1


A.3/2A Eye Irrit. 2A H319

< 0.5% Naphthalene

Index number: 601-052-00-2, CAS: 91-20-3, EC: 202-049-5


A.6/2 Carc. 2 H351


US-HAE/A1 Aquatic Acute 1 H400


US-HAE/C1 Aquatic Chronic 1 H410


A.1/4/Oral Acute Tox. 4 H302

## SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Remove contaminated clothing immediately and dispose of safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. Seek immediately medical advice.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

Not known.

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Not known.

## SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

Not known.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

## SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use empty container before they have been cleaned.

Before making transfer operations, assure that there are not any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Instructions as regards storage premises:

Adequate ventilation in working area.

Packaging suggested:

Plastic drums.

7.3. Specific end use(s)

None in particular

## SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Fuel oil, no. 2

ACGIH - LTE(8h): 100 mg/m3 - Notes: Skin, A3, (IFV) - Dermatitis

Naphthalene

UK - EH40/2005 (WEL), 10 ppm, 15 ppm - Notes: Skin; A4.

ACGIH, 10 ppm - Notes: Skin, A3 - URT irr, cataracts, hemolytic anemia

DNEL Exposure Limit Values

2-[2-(2-butoxyethoxy)ethoxy]ethanol

Worker Industry: 195 mg/m3 - Worker Professional: 195 mg/m3 - General population: 117 mg/m3 - Frequency: Long Term, systemic effects Human Inhalation

Worker Industry: 50 mg/kg - Worker Professional: 50 mg/kg - General population: 25 mg/kg - Frequency: Long Term, systemic effects Human Dermal

General population: 2.5 mg/kg - Frequency: Long Term, systemic effects Human Oral

PNEC Exposure Limit Values

2-[2-(2-butoxyethoxy)ethoxy]ethanol

Fresh Water 1.5 mg/l

Marine water 0.15 mg/l

Intermittent release 5 mg/l

STP 200 mg/l

Freshwater sediments 5.77 mg/kg

Marine water sediments 0.13 mg/kg

Soil (agricultural) 0.45 mg/kg

Secondary poisoning 111 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles. (ref. EN 166, EN 140, EN175).

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton. (ref. EN 340).

Protection for hands:

Chemical-resistant protective gloves (EN 374). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). As general indication we suggest as suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): nitrile rubber (NBR; >= 0.4 mm thickness) and suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): nitrile rubber (NBR; >= 0.4 mm thickness). This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances-mixtures.

Respiratory protection:

Use adequate protective respiratory equipment. (ref. EN 136, EN 140, EN 141, EN 143, EN 149, EN 405).

Thermal Hazards:

None

Environmental exposure controls:

None

## SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Appearance and colour: | Liquid, dark |
| Odour: | Hydrocarbon |
| Odour threshold: | N.D. |
| pH: | N.D. |
| Melting point / freezing point: | N.D. |
| Initial boiling point and boiling range: | >100C (>212F) |
| Solid/gas flammability: | N.D. |
| Upper/lower flammability or explosive limits: | N.D. |

| | |
|---|---|
| Vapour density: | N.D. |
| Flash point: | >63C (>145F) |
| Evaporation rate: | N.D. |
| Vapour pressure: | N.D. |
| Relative density: | 0.850 - 1.000 |
| Solubility in water: | Insoluble |
| Solubility in oil: | N.D. |
| Partition coefficient (n-octanol/water): | N.D. |
| Auto-ignition temperature: | N.D. |
| Decomposition temperature: | N.D. |
| Viscosity: | N.D. |
| Explosive properties: | N.D. |
| Oxidizing properties: | N.D. |

9.2. Other information

| | |
|---|---|
| Miscibility: | N.D. |
| Fat Solubility: | N.D. |
| Conductivity: | N.D. |
| Substance Groups relevant properties | N.D. |
| Osha Flammability: | Combustible liquid |

## SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Stable under normal conditions

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

Not known.

## SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

a) acute toxicity:

Toxicity Oral Rat LD50> 2000 mg/kg. Based on components.

b) skin corrosion/irritation:

Irritation Skin : Repeated and prolonged contacts may cause slight irritation.

c) serious eye damage/irritation:

Irritation Eye : Causes serious eye damage.

Toxicological information of the main substances found in the mixture:

2-[2-(2-butoxyethoxy)ethoxy]ethanol

a) acute toxicity:

Toxicity Oral Rat LD50= 5170 mg/kg Literature data.

Toxicity Skin Rabbit LD50= 3540 mg/kg Literature data.

b) skin corrosion/irritation:

Skin Irritant Rabbit : Not irritant. Literature data.

c) serious eye damage/irritation:

Eye Irritant Rabbit : Irritant. Literature data.

d) respiratory or skin sensitisation:

Guinea pig maximization test Skin Guinea pig : Not sensitizing. By analogy to product with similar composition.

e) germ cell mutagenicity:

OECD 471 Salmonella typhimurium : Not mutagenic. - Duration: 48h Literature data.

g) reproductive toxicity:

Reproductive Toxicity Oral Mouse NOAEL = 720 mg/kg By analogy to product with similar composition.

Other : N.D.

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.D.:

a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

Carcinogenic IARC: This product contains Naphthalene classified in IARC as category 2B.

## SECTION 12: Ecological information

12.1. Toxicity

Ecological information of the mixture:

a) Aquatic acute toxicity:

Data not available.

Ecological information of the main substances found in the mixture:

2-[2-(2-butoxyethoxy)ethoxy]ethanol

a) Aquatic acute toxicity:

Fish NOEC = 1000 mg/l - Duration h: 96 - Notes: Literature data.

Daphnia magna LC50 = 2210 mg/l - Duration h: 48 - Notes: Literature data.

12.2. Persistence and degradability

Ecological information of the mixture:

Biodegradability: Data not available.

Ecological information of the main substances found in the mixture:

2-[2-(2-butoxyethoxy)ethoxy]ethanol

Biodegradability: Readily biodegradable - Test: OECD 301 D - Duration: 28 days: 85% - Notes: Literature data.

12.3. Bioaccumulative potential

Ecological information of the mixture:

Bioaccumulation: Data not available.

Ecological information of the main substances found in the mixture:

2-[2-(2-butoxyethoxy)ethoxy]ethanol

Bioaccumulation: Not bioaccumulative - Test: BCF - Bioconcentrantion factor 3 - Notes: Calculated data.

12.4. Mobility in soil

Ecological information of the mixture:

Mobility in soil: Data not available.

Ecological information of the main substances found in the mixture:

2-[2-(2-butoxyethoxy)ethoxy]ethanol

Mobility in soil: Very high - Test: Koc: 10 - Notes: Calculated data.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

Use according to criteria of good industrial practice, avoiding product dispersion in the environment.

## SECTION 13: Disposal considerations

13.1. Waste treatment methods

If possible recover the product, otherwise dispose of in authorized landfill or incineration in accordance with local regulation.

## SECTION 14: Transport information

14.1. UN number

N.A.

14.2. UN proper shipping name

Proper Shipping Name: N.A.

14.3. Transport hazard class(es)

US DOT (non-bulk): Not Regulated
US DOT (bulk): NA1993, Combustible liquid, n.o.s., (Diesel fuel), PG-III
Road (ADR): Not Regulated
Air (ICAO/IATA): Not Regulated
Sea (IMO/IMDG): Not Regulated

14.4. Packing group

ADR-Packing Group: N.A.
IATA-Packing group: N.A.
IMDG-Packing group: N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N.A.

## SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances). Dir. 99/45/EEC (Classification, packaging and labelling of dangerous preparations). Dir. 98/24/EC (Risks related to chemical agents at work). Dir. 2000/39/EC (Occupational exposure limit values); Dir. 2006/8/CE. Regulation (CE) n. 1907/2006 (REACH).
For non-EU Countries, the Material Safety Data Sheet it is prepared following the main principles of Globally Harmonized System of Classification and Labelling of Chemicals (GHS) which are adopted worldwide.

Refer to other local regulations that may be relevant (i.e. : sanitary control, waste treatment etc.)

15.2. Chemical safety assessment

No

Regulatory information USA:

| HMIS INFORMATION | | HAZARD INDEX: | 4 = SEVERE |
|---|---|---|---|
| HEALTH | 2* | | 3 = SERIOUS |
| FLAMMABILITY | 2 | | 2 = MODERATE |
| REACTIVITY | 1 | | 1 = SLIGHT |
| PERSONAL PROT. | D | | 0 = MINIMAL |

D: Face shield, gloves, chemical apron *: Chronic effects - See Section 11.

| n | Name | CAS | TSCA | CERCLA | Sara302 | Sara313 |
|---|---|---|---|---|---|---|
| 0 | 2-(2-(2-butoxyethoxy)ethoxy)ethanol. | 143-22-6 | Yes | No | No | Yes |
| 1 | Fuel oil, no. 2 | 68476-30-2 | Yes | No | No | No |
| 2 | Propylene carbonate | 108-32-7 | Yes | No | No | No |
| 3 | Naphthalene | 91-20-3 | Yes | 100lbs | No | Yes |
| 4 | Non-hazardous components. | - | Yes | No | No | No |

SARA Title III Section 311/312: Immediate (acute) health effects./Delayed (chronic) health effects/Fire Hazard
State Regulations:
Canadian Regulations: All the ingredients as such or as chemical group are registered in DSL.
Canadian WHMIS Classification: D-2A (Very Toxic), D-2B (Toxic material), B-3 (Combustible liquid)
California Proposition 65: This product contains Naphthalene - POTENTIAL CANCER HAZARD

## SECTION 16: Other information

N.A. = Not Applicable
N.D. = No Data available
Full text of phrases referred to in Section 3.
H318 Causes serious eye damage.
H304 May be fatal if swallowed and enters airways.
H351 Suspected of causing cancer.
H319 Causes serious eye irritation.
H302 Harmful if swallowed.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H335 May cause respiratory irritation.
This safety data sheet has been completely updated in compliance to Regulation 453/2010.

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:
TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases;
NIOSH - Registry of toxic effects of chemical substances (1983) - Occupational Health Guidelines for Chemical Hazards (1995) - Pocket Guide to Chemical Hazards (on line)
OECD - eChemPortal: The Global Portal to Information on Chemical Substances;
CESIO - Human Health and Environmental classification of AE, AES, AS and various surfactant families.
M.Sittig-Handbook of toxic and Hazardous Chemicals and Carcinogens- III Ed.
E.R. Plunkett - Handbook of Industrial Toxicology - III Ed. 1991.
Samson Chem. Pub.-Chemical Safety Sheet working safely with hazardous chemical.
SAX'S Dangerous Properties of Industrial Materials. VIII (1993)
ACGIH "2013 TLVs and BEIs".
ILV "1998/24/EC Directive and subsequent addition".
The product must be stored, handled and used according to criteria of good industrial practice and to regulations in force. This leaflet is offered for your consideration and guidance only. This leaflet complements the Technical Data Sheet but does not replace it. The information herein contained is given to the best of our knowledge at the time of issue.
Due to the several ways in which the product may be used and the possible interaction with variables not depending on or unknown to the supplier, we also cannot accept any liability whatsoever for any loss or damage however arising from the handling and use of our products.

| | |
|---|---|
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society). |
| CLP: | Classification, Labeling, Packaging. |
| DNEL: | Derived No Effect Level. |
| EINECS: | European Inventory of Existing Commercial Chemical Substances. |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany. |
| GHS: | Globally Harmonized System of Classification and Labeling of Chemicals. |
| IATA: | International Air Transport Association. |
| IATA-DGR: | Dangerous Goods Regulation by the "International Air Transport Association" (IATA). |
| ICAO: | International Civil Aviation Organization. |

| | |
|---|---|
| ICAO-TI: | Technical Instructions by the "International Civil Aviation Organization" (ICAO). |
| IMDG: | International Maritime Code for Dangerous Goods. |
| INCI: | International Nomenclature of Cosmetic Ingredients. |
| KSt: | Explosion coefficient. |
| LC50: | Lethal concentration, for 50 percent of test population. |
| LD50: | Lethal dose, for 50 percent of test population. |
| LTE: | Long-term exposure. |
| PNEC: | Predicted No Effect Concentration. |
| REACH: | Registration Evaluation and Authorization of Chemicals. |
| RID: | Regulation Concerning the International Transport of Dangerous Goods by Rail. |
| STE: | Short-term exposure. |
| STEL: | Short Term Exposure limit. |
| STOT: | Specific Target Organ Toxicity. |
| SVHC: | Candidate List of Substances of Very High Concerns. |
| TLV: | Threshold Limiting Value. |
| TWATLV: | Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). |
| WGK: | German Water Hazard Class. |
| ASTM: | American Society of Testing and Materials. |
| CBI: | Confidential Business Information |
| CFR: | Code of Federal Regulations |
| DOT: | Department of Transportation |
| EPA: | Environmental Protection Agency |
| EU: | European Union |
| FIFRA: | Federal Insecticide, Fungicide and Rodenticide Act |
| HCS: | Hazard Communication Standard |
| IARC: | International Agency for Research on Cancer |
| IUPAC: | International Union of Pure and Applied Chemistry |
| mg/kg: | Milligram per kilogram |
| MSDS: | Material Safety Data Sheet |
| NAFTA: | North American Free Trade Agreement |
| OSHA: | Occupational Safety and Health Administration |
| OECD: | The Organization for Economic Cooperation and Development |
| QSARs: | Quantitative Structure-Activity Relationships |
| TSCA: | Toxic Substances Control Act |
| UN: | United Nations |
| WHMIS: | Workplace Hazardous Materials Information System |