

Material Safety Data Sheet(MSDS)

This Material Safety Data Sheet(MSDS) has been provided

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1. Product Name : TECTYL COOL 260

2. Advisable use and Restriction

☐ Advisable use : Water soluble cutting/grinding oil

☐ Restriction :

– Do not use product for any other non-recommended purposes

3. Manufacturer information

☐ Manufacture information :: Lot C_2D_CN, My Phuoc 3 Park, Thoi Hoa Ward, Ben Cat Town, Binh Duong Province (+84-274-3803299)

☐ Company : Tectyl Oil & Chemicals Vina

☐ Address :: Lot C_2D_CN, My Phuoc 3 Park, Thoi Hoa Ward, Ben Cat Town, Binh Duong Province (+84-274-3803299)

☐ Information service or emergency number : (+84-274-3803299)

☐ Dept. responsible for information/contact number : Tectyl Oil & Chemicals Vina
– R&D CENTER Team

2. HAZARD IDENTIFICATION

1. Hazard classification

- ACUTE TOXICITY(Inhalation:Dust/mist) Category 4
- SKIN CORROSION/IRRITATION Category 1
- SERIOUS EYE DAMAGE/EYE IRRITATION Category 1
- SKIN SENSITIZATION Category 1
- REPRODUCTIVE TOXICITY Category 1B
- LONG-TERM AQUATIC HAZARD Category 3

2. Allocation label elements

☐ Symbol



☐ Signal word : DANGER

☐ Hazard statements

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H360 May damage fertility or the unborn child (state specific effect if known)
(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H412 Harmful to aquatic life with long lasting effects.

○ Precautionary statements

– Prevention

P201 Obtain special instructions before use.

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

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

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash ... thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

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

P281 Use personal protective equipment as required.

– Response

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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 or doctor/physician.

P312 Call a POISON CENTER or doctor/physician you feel unwell.

P321 Specific treatment (see ... on this label).

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

– Storage

P405 Store locked up.

– Disposal

P501 Dispose of contents/container to ...

3. Other hazard information not included in hazard classification (NFPA)

※ No NFPA data of the product. thus NFPA data was described by the product

Chemical Name	NFPA Level		
	Health	Flamm	Reactivity

1. DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC	1	1	0
2. WATER	0	0	0
3. 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-	1	1	0
4. ISOPROPANOLAMINE	2	2	0
5. ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED	0	1	0
7. TRIETHANOLAMINE	2	1	1
8. ETHANOLAMINE	3	2	0
6. TALL OIL	1	1	0
9. HEXANOIC ACID, 6,6',6 -(1,3,5-TRIAZINE-2,4,6-TRIIYLTRIIMINO)TRIS-	1	1	0
¹¹ GLYCERIN	1	1	0
¹⁰ BORIC ACID (H3BO3)	1	0	0
¹² Substance1	3	1	0
¹³ Substance2	3	1	0
¹⁴ Substance3	3	0	0
¹⁵ Substance4	2	1	0

3. INGREDIENT INFORMATION

Components	Common name	CAS No.	PCT(W%)
1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC	DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC	64742-55-8	40 ~ 50
2) WATER	WATER	7732-18-5	5 ~ 15
3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER.	9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER.	57675-44-2	5 ~ 10
4) ISOPROPANOLAMINE	ISOPROPANOLAMINE	78-96-6	5 ~ 10
5) ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED	ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED	68131-40-8	1 ~ 5
6) TRIETHANOLAMINE	TRIETHANOLAMINE	102-71-6	1 ~ 5
7) ETHANOLAMINE	ETHANOLAMINE	141-43-5	1 ~ 5
8) TALL OIL	TALL OIL	8002-26-4	1 ~ 5
9) HEXANOIC ACID, 6,6',6 -(1,3,5-TRIAZINE-2,4,6-TRIIYLTRIIMINO)TRIS-	HEXANOIC ACID, 6,6',6 -(1,3,5-TRIAZINE-2,4,6-TRIIYLTRIIMINO)TRIS-	80584-91-4	1 ~ 2
10) GLYCERIN	GLYCERIN	56-81-5	1 ~ 5

11) BORIC ACID (H ₃ BO ₃)	BORIC ACID (H ₃ BO ₃)	10043-35-3	0.5 ~ 3
12) Substance1	–	–	3 ~ 8
13) Substance2	–	–	1 ~ 5
14) Substance3	–	–	0.1 ~ 1
15) Substance4	–	–	0.01 ~ 1

4. FIRST AID MEASURES

1. Following eye contact

- Get medical aid immediately.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses` if present and easy to do. Continue rinsing.
- In case of contact with material, immediately flush eyes with running water for at least 15 minutes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Seek immediate medial assistance.

2. Following skin contact

- Call a POISON CENTER or doctor/physician you feel unwell.
- For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat.
- For minor skin contact, avoid spreading material on unaffected skin.
- Get medical aid immediately.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice/attention.
- In case of contact with material, immediately flush skin with running water for at least 15 minutes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Launder contaminated clothing and shoes before re-use.
- Remove and isolate contaminated clothing and shoes.
- Seek immediate medial assistance.
- Wash contaminated clothing before reuse.

3. Following inhalation

- Administer oxygen if breathing is difficult.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Give artificial respiration if victim is not breathing.
- IF exposed or concerned: Get medical advice/ attention.
- If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Immediately call a POISON CENTER or doctor/physician.
- Keep victim warm and quiet.
- Move to fresh air.
- Seek immediate medical assistance.

4. Following ingestion

- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Get medical aid immediately.
- IF exposed or concerned: Get medical advice/ attention.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- If unconscious but breathing, never give anything by mouth.
- Seek immediate medical assistance.

5. Advice to physician

- Do not apply drugs of the adrenaline ephedrine group.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Exposures require specialized first aid with contact and medical follow-up .

5. FIRE FIGHTING MEASURES

1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media
 - Regular foam., Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material., Use dry sand or earth to smother fire., Water spray., CO2., Dry chemical.
- Unsuitable extinguishing media
 - High-pressure water., Direct water.
- Large fire
 - Alcohol-resistant foam., CO2., Water spray/fog., Dry chemical., Excess water.,
Foam

2. Special hazards arising from the substance

- Pyrolytic product
 - Can decompose at high temperatures forming toxic gases.
 - During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
 - Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Risk of fire and explosion
 - Containers may explode when heated.
 - Fire may produce irritating and/or toxic gases.
 - May be ignited from heat, friction or contamination.

- Some may burn but none ignite readily.

3. Special protective equipment for firefighters

- Contact may cause burns to skin and eyes.
- Dike fire—control water for later disposal; do not scatter the material.
- Evacuate area and fight fire from a safe distance.
- Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.
- Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Move containers from fire area if you can do it without risk.
- Rescuers should put on appropriate protective gear.
- Runoff may cause pollution.
- Substance may be transported hot.
- Substance may be transported in a molten form.

6. ACCIDENTAL RELEASE MEASURES

1. Health considerations and protective equipment

- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Clean up spills immediately, observing precautions in Protective Equipment section
- Cover with plastic sheet to prevent spreading.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Do not enter areas which have more than 23.5% oxygen in the atmosphere, without respirator or air supplied mask.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Do not touch or walk through spilled material.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area)
- Isolate hazard area.
- Keep unnecessary and unprotected personnel from entering.
- Please note that materials and conditions to be avoided.
- Prevent dust cloud.
- Stop leak if you can do it without risk.
- Ventilate the contaminated area.

2. Environmental precautions

- Avoid release to the environment.
- Keep out of waterways.

- Prevent entry into waterways, sewers, basements or confined areas.

3. For cleaning up

- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Absorb the liquid and scrub the area with detergent and water.
- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry
- Large Spill: Dike far ahead of liquid spill for later disposal.
- Reduce airborne dust and prevent scattering by moistening with water.
- Small Spill: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
- Small Spill: Flush area with flooding quantities of water.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. HANDLING AND STORAGE

1. Precautions for safe handling

- Avoid any skin and eye contact when insert undiluted solution. Wash ... thoroughly after handling.
- Caution: Dangerous fire hazard when exposed to heat, or flame, sparks.
- Use adequate machine for prevention when package handling.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

2. Conditions for safe storage (including any incompatibilities.

- Choose a place that can be protected from strong oxidizers and acid.
- Drum Handling: Must work at safe place., Loading more than 3 stack is prohibited.
- Store containers: AVOID the place where can be damage and contamination.
- Store in a cool/low-temperature, well-ventilated {dry} place {away from heat and ignition sources}

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1. Exposure exposure limits, Biological exposure standard :

※ No exposure limits and biological exposure data of the product. thus data was described

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- ☐ Other regulation (Domestic) : Not established
- ☐ ACGIH : Not established
- ☐ Biological standard : Not established

2) WATER

- ☐ Other regulation (Domestic) : Not established
- ☐ ACGIH : Not established
- ☐ Biological standard : Not established

- 3) **9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 4) **ISOPROPANOLAMINE**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 5) **ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 6) **TRIETHANOLAMINE**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 7) **ETHANOLAMINE**
- ☐ Other regulation (Domestic) :
TWA : 3ppm;8mg/m³;6ppm;
STEL : 6ppm;15mg/m³;6ppm;
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 8) **TALL OIL**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 9) **HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 10) **GLYCERIN**
- ☐ Other regulation (Domestic) :
TWA : 5 (respirable fraction, mist)ppm;15 (total dust)mg/m³;
STEL : 20 (mist, total particulate)mg/m³;
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established
- 11) **BORIC ACID (H3BO3)**
- ☐ Other regulation (Domestic) : Not established
 - ☐ ACGIH : Not established
 - ☐ Biological standard : Not established

12)Substance1

- ☐ Other regulation (Domestic) : Not established
- ☐ ACGIH : Not established
- ☐ Biological standard : Not established

13)Substance2

- ☐ Other regulation (Domestic) : Not established
- ☐ ACGIH : Not established
- ☐ Biological standard : Not established

14)Substance3

- ☐ Other regulation (Domestic) : Not established
- ☐ ACGIH : Not established
- ☐ Biological standard : Not established

15)Substance4

- ☐ Other regulation (Domestic) : Not established
- ☐ ACGIH : Not established
- ☐ Biological standard : Not established

2. Appropriate engineering controls

- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

3. Personal protection

- ☐ Respiratory protection
 - If high frequency of use or exposure, wear air respirator.
- ☐ Eye protection
 - Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
 - Wear face shield to protect eyes from scattering dust or hazardous liquid.
 - Wear Non-moisture permeable goggle for dust protection.
- ☐ Hand protection
 - Wear Non-moisture permeable chemical resistance protective gloves(latex, nitrile rubber, PVC) for prevent skin contact.
- ☐ Body protection
 - When contact is likely wear chemical resistant, oil and grease resistant, non-moisture permeable shoes and clothes.

1. Appearance : Amber
2. Odour : Mild Amine
3. Odour threshold : No data available
4. pH Values : 9.7
5. Melting point/freezing point : No data available
6. Initial boiling point and boiling range : No data available
7. Flash point : 139°C
8. Evaporation rate : No data available
9. Flammability(solid, gas) : Not applicable
10. Upper/lower flammability or explosive limits : No data available
11. Solubility : No data available
12. Vapour pressure : No data available
13. Relative density : 0.94(15/4°C)
14. n-octanol/water partition coefficient : No data available
15. Auto ignition temperature : No data available
16. Decomposition temperature : No data available
17. Vapor Densities : No data available
18. Viscosity : No data available
19. Molecular weight(mass) : No data available

10. STABILITY AND REACTIVITY

1. Stability and hazardous reactivity
 - Can decompose at high temperatures forming toxic gases.
 - Containers may explode when heated.
 - Fire may produce irritating and/or toxic gases.
 - Fire may produce irritating, corrosive and/or toxic gases.
 - May cause toxic effects if inhaled.
 - Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
 - Some liquids produce vapors that may cause dizziness or suffocation.
 - Some may burn but none ignite readily.
 - Stable under normal temperatures and pressures.
2. Conditions to avoid
 - Heat.
 - Ignition source(heat, spark, flame, etc.).
3. Incompatible materials
 - Combustibles, reducing material.
 - Combustibles.
 - Irritating and/or toxic gas.

4. Hazardous decomposition products

- Corrosive/toxic fume.
- During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
- Irritating and/or toxic gas.
- Irritating, corrosive and/or toxic gas.

11. TOXICOLOGICAL INFORMATION

1. Exposure route information

- Following eye contact : Burn, Eye damage, Indistinctness, Irritating
- Following ingestion : Aspiration hazard, Change of hypertension, Dermatological disorders, Diarrhea, Dizziness, Haematological disorder, Headache, Insomniac, Irregular, Irritating, Paralysis, Pathological drunkenness, Pyrexia, Renal abnormality, Sicchasia, Spasm, Stethemia, Stomachache, Vomiting
- Following inhalation : Change of hypertension, Cough, Dermatological disorders, Diarrhea, Dyspnoea, Irregular, Irritating, Pulmonary abnormality, Sicchasia, Stomachache, Throat infection, Vomiting
- Following skin contact : Allergic reaction, Change of hypertension, Dermatological disorders, Diarrhea, Irregular, Irritating, itching, Liver abnormality, Renal abnormality, Sicchasia, Stomachache, Vomiting

2. Health hazard information

※ No data of the product. thus data was described by the product component.

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

○ ACUTE TOXICITY

- Oral : Not classified / LD50 > 5000 mg/kg Rat
- Dermal : Not classified / LD50 > 2000 mg/kg Rabbit
- Inhalation–Gases : No data available
- Inhalation–Vapours : No data available

○ ACUTE TOXICITY

- Inhalation–Dust/mist : Category 4 / LC50 2.18 mg/L Rat

○ SKIN CORROSION/IRRITATION : Category 2 / Irritating Rabbit

○ SERIOUS EYE DAMAGE/EYE IRRITATION : Category 2 / Not irritating Rabbit

○ RESPIRATORY SENSITIZATION : No data available

○ SKIN SENSITIZATION : Not classified / Not sensitising Guinea pig

○ CARCINOGENICITY : Not classified

- Notice of Employment and Labor : Not applicable
- IARC : Not applicable
- OSHA : Not applicable
- ACGIH : Not applicable
- NTP : Not applicable
- EU CLP : Not applicable (Excluded if under 3% of DMSO extract, measured by IP346 method)

○ GERM CELL MUTAGENICITY : Not classified / Negative Mouse

- ☐ REPRODUCTIVE TOXICITY : Not classified / Reproductive performance was not adversely affected at any dose level evaluated. Rat
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / No systemic effects were observed. Rat
- ☐ ASPIRATION HAZARD : No data available

2) WATER

- ☐ ACUTE TOXICITY
 - Oral : Not classified / LD50 > 90 mL/kg
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : No data available
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : No data available
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : No data available
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : Not classified / Negative Salmonella typhimurium
- ☐ REPRODUCTIVE TOXICITY : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ☐ ASPIRATION HAZARD : No data available

3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-

- ☐ ACUTE TOXICITY
 - Oral : No data available
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : No data available
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : No data available

- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : No data available
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : No data available
- ☐ REPRODUCTIVE TOXICITY : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ☐ ASPIRATION HAZARD : No data available

4) ISOPROPANOLAMINE

- ☐ ACUTE TOXICITY
 - Oral : Not classified / LD50 2813 mg/kg Rat
 - Dermal : Not classified / LD50 1851 mg/kg Rabbit
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Category 1 / Corrosive Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Category 1 / Corrosive Rabbit
- ☐ RESPIRATORY SENSITIZATION : Not classified / Not sensitising Human
- ☐ SKIN SENSITIZATION : Not classified / Not sensitising Human
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : Not classified / Negative *Drosophila melanogaster*
- ☐ REPRODUCTIVE TOXICITY : Not classified / No effect of reproductive performance and fertility. Rat
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : Category 3 (Respiratory tract irritation) / Exposure to MIPA caused sensory irritation (immediate onset) and little pulmonary irritation (delayed onset). Mouse
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / There was no mortality noted, no observations made during clinical exams or detailed clinical observations at 1000 mg/kg in rats. Rat

- ☐ ASPIRATION HAZARD : Not classified / Rats showed chemical pneumonia and rhinitis at 0.24mg/l. Rat

5) ALCOHOLS, C11–15–SECONDARY, ETHOXYLATED

- ☐ ACUTE TOXICITY
 - Oral : Not classified / LD50 2380 mg/kg Rat
 - Dermal : Not classified / LD50 2000 mg/kg Rabbit
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Not classified / Not irritating Human
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Not classified / Not irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : Category 1 / Sensitising Mouse
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : Not classified / Negative Human
- ☐ REPRODUCTIVE TOXICITY : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : Category 3 (Respiratory tract irritation) / May cause irritation if inhaled
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ☐ ASPIRATION HAZARD : No data available

6) TRIETHANOLAMINE

- ☐ ACUTE TOXICITY
 - Oral : Not classified / LD50 6400 mg/kg Rat
 - Dermal : Not classified / LD50 > 2000 mg/kg Rabbit
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Not classified / Not irritating Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Not classified / Not irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : Not classified / Not sensitising Guinea pig
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable

- IARC : 3
- OSHA : Not applicable
- ACGIH : Not applicable
- NTP : Not applicable
- EU CLP : Not applicable
- GERM CELL MUTAGENICITY : Not classified / Negative CHO cell
- REPRODUCTIVE TOXICITY : Not classified / Lower mean number of implantation sites and litter size Rat
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / Not considered significant Rat
- ASPIRATION HAZARD : No data available

7) ETHANOLAMINE

- ACUTE TOXICITY
 - Oral : Category 4 / LD50 1515 mg/kg Rat
 - Dermal : Category 4 / LD50 2504 mg/kg Rabbit
- ACUTE TOXICITY
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : Not classified / LC0 > 0.0005 mg/L Rat
 - Inhalation–Dust/mist : No data available
- SKIN CORROSION/IRRITATION : Category 1 / Corrosive Rabbit
- SERIOUS EYE DAMAGE/EYE IRRITATION : Category 1 / Corrosive Rabbit
- RESPIRATORY SENSITIZATION : No data available
- SKIN SENSITIZATION : Category 1 / Sensitising Human
- CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- GERM CELL MUTAGENICITY : Not classified / Negative Mouse
- REPRODUCTIVE TOXICITY : Not classified / No test substance–related adverse effects Rat
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / No adverse systemic effects were reported at 150 mg/m3 monoethanol amine in rats. Rat
- ASPIRATION HAZARD : No data available

8) TALL OIL

- ☐ ACUTE TOXICITY
 - Oral : Not classified / LD50 7600 mg/kg Rat
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Not classified / Slightly irritating Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Not classified / Slightly irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : No data available
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : No data available
- ☐ REPRODUCTIVE TOXICITY : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : Category 3 (Respiratory tract irritation) / May cause respiratory irritation, cough, chest pain if inhaled
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ☐ ASPIRATION HAZARD : No data available

9) **HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-**

- ☐ ACUTE TOXICITY
 - Oral : No data available
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Category 2 / Irritating
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Category 2 / Irritating
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : No data available
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable

- NTP : Not applicable
- EU CLP : Not applicable
- GERM CELL MUTAGENICITY : No data available
- REPRODUCTIVE TOXICITY : No data available
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ASPIRATION HAZARD : No data available

10) GLYCERIN

- ACUTE TOXICITY
 - Oral : Not classified / LD50 23000 mg/kg Mouse
 - Dermal : Not classified / LD50 56750 mg/kg Guinea pig
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : Not classified / LC50 > 2.75 mg/L Rat
 - Inhalation–Dust/mist : No data available
- SKIN CORROSION/IRRITATION : Not classified / Not irritating Human
- SERIOUS EYE DAMAGE/EYE IRRITATION : Not classified / Not irritating Human
- RESPIRATORY SENSITIZATION : No data available
- SKIN SENSITIZATION : Not classified / Not sensitising Human
- CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- GERM CELL MUTAGENICITY : Not classified / Negative Rat hepatocytes
- REPRODUCTIVE TOXICITY : Not classified / There was no effect noted on growth, fertility and reproductive performance through two generations. Rat
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / Absence of treatment related effects in high dose animals. Rat
- ASPIRATION HAZARD : No data available

11) BORIC ACID (H3BO3)

- ACUTE TOXICITY
 - Oral : Not classified / LD50 > 2600 mg/kg Rat
 - Dermal : Not classified / LD50 > 2000 mg/kg Rabbit
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : Not classified / LC50 > 2.538 mg/l Rat

- ☐ SKIN CORROSION/IRRITATION : Not classified / Slight or no irritation Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Not classified / Not irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : Not classified / Non sensitising Guinea pig
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : A4
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : Not classified / Negative Chinese hamster Ovary (CHO) cell
- ☐ REPRODUCTIVE TOXICITY : Category 1B / NOAEL 17.5 mg/kg Rat
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / NOAEL 100 mg/kg Rat
- ☐ ASPIRATION HAZARD : No data available

12) Substance1

- ☐ ACUTE TOXICITY
 - Oral : Category 4 / LD50 373 mg/kg Rat
- ☐ ACUTE TOXICITY
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Category 1 / Severe irritating Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Category 1 / Severe irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : No data available
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : No data available
- ☐ REPRODUCTIVE TOXICITY : No data available

- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ☐ ASPIRATION HAZARD : No data available

13) Substance2

- ☐ ACUTE TOXICITY
 - Oral : Not classified / LD50 > 2000 mg/kg Rat
 - Dermal : Not classified / LD50 > 2000 mg/kg Rat
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : Category 1 / Corrosive Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Category 1 / Irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : Not classified / Not sensitising Guinea pig
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : Not classified / Negative Salmonella typhimurium
- ☐ REPRODUCTIVE TOXICITY : Not classified / There were no differences between the offspring of treated and control rats with respect to teratogenic or fetotoxic effects . Rat
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : Not classified / May cause irritation if inhaled
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / The effects noted in the forestomach are considered to reflect local irritation at the point of contact. Rat
- ☐ ASPIRATION HAZARD : No data available

14) Substance3

- ☐ ACUTE TOXICITY
 - Oral : Category 4 / LD50 1020 mg/kg Rat
- ☐ ACUTE TOXICITY
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- ☐ SKIN CORROSION/IRRITATION : No data available

- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : No data available
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : No data available
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : No data available
- ☐ REPRODUCTIVE TOXICITY : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ☐ ASPIRATION HAZARD : No data available

15) Substance4

- ☐ ACUTE TOXICITY
 - Oral : Category 4 / LD50 600 mg/kg Rat
- ☐ ACUTE TOXICITY
 - Dermal : Not classified / LD50 > 10000 mg/kg Rabbit
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : Not classified / LC50 > 1.5 mg/L Rat
- ☐ SKIN CORROSION/IRRITATION : Not classified / Not irritating Rabbit
- ☐ SERIOUS EYE DAMAGE/EYE IRRITATION : Not classified / Slightly irritating Rabbit
- ☐ RESPIRATORY SENSITIZATION : No data available
- ☐ SKIN SENSITIZATION : Not classified / Non sensitising Guinea pig
- ☐ CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- ☐ GERM CELL MUTAGENICITY : Not classified / Negative Chinese hamster Ovary (CHO) cell
- ☐ REPRODUCTIVE TOXICITY : Not classified / The 104 week oral study of 1H-benzotriazole in mice did not find any evidence of pathology in the reproductive organs. Mouse
- ☐ SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available

- ☐ SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified /
No clinical symptoms Mouse
- ☐ ASPIRATION HAZARD : No data available

12. ECOLOGICAL INFORMATION

1. Aquatic toxicity

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- ☐ Fish : LC50 > 5000 mg/L Fish
- ☐ Crustacea : EC50 > 1000 mg/L Aquatic invertebrates
- ☐ Aquatic algae : NOEC >= 100 mg/L Aquatic algae

2) WATER

- ☐ Fish : No data available
- ☐ Crustacea : No data available
- ☐ Aquatic algae : No data available

3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-

- ☐ Fish : LC50 4.2 mg/L Fish
- ☐ Crustacea : No data available
- ☐ Aquatic algae : No data available

4) ISOPROPANOLAMINE

- ☐ Fish : LC50 >= 214 mg/L Fish
- ☐ Crustacea : EC50 108.82 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC50 32.7 mg/L Aquatic algae

5) ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED

- ☐ Fish : LC50 3 mg/L Fish
- ☐ Crustacea : EC50 5.66 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC50 1.03 mg/L Aquatic algae

6) TRIETHANOLAMINE

- ☐ Fish : No data available
- ☐ Crustacea : No data available
- ☐ Aquatic algae : No data available

7) ETHANOLAMINE

- ☐ Fish : LC50 349 mg/L Fish
- ☐ Crustacea : EC50 65 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC50 2.5 mg/L Aquatic algae

8) TALL OIL

- ☐ Fish : LC50 5 mg/L Fish
- ☐ Crustacea : EC50 > 5000 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC50 3300 mg/L Aquatic algae

9) **HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-**

- ☐ Fish : No data available
- ☐ Crustacea : No data available
- ☐ Aquatic algae : No data available

10) **GLYCERIN**

- ☐ Fish : No data available
- ☐ Crustacea : No data available
- ☐ Aquatic algae : No data available

11) **BORIC ACID (H₃BO₃)**

- ☐ Fish : LC₅₀ 74 mg/L Fish
- ☐ Crustacea : EC₅₀ ≥ 658 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC₅₀ 66 mg/L Aquatic algae

12) **Substance1**

- ☐ Fish : LC₅₀ 62 mg/L Fish
- ☐ Crustacea : EC₅₀ 8 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC₅₀ > 1 mg/L Aquatic algae

13) **Substance2**

- ☐ Fish : LC₅₀ 104 mg/L Fish
- ☐ Crustacea : EC₅₀ 96 mg/L Aquatic invertebrates
- ☐ Aquatic algae : EC₅₀ 44 mg/L Aquatic algae

14) **Substance3**

- ☐ Fish : LC₅₀ 10 mg/L Fish
- ☐ Crustacea : EC₅₀ 0.062 mg/L Aquatic invertebrates
- ☐ Aquatic algae : No data available

15) **Substance4**

- ☐ Fish : No data available
- ☐ Crustacea : No data available
- ☐ Aquatic algae : No data available

2. Persistence and degradation

1) **DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC**

- ☐ Degradation : No data available
- ☐ n-octanol water partition coefficient : log K_{ow} 6

2) **WATER**

- ☐ Degradation : No data available
- ☐ n-octanol water partition coefficient : No data available

3) **9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-**

- ☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow > 24.73

4) ISOPROPANOLAMINE

☐ Degradation : DOC 83 %

☐ n-octanol water partition coefficient : log Kow -0.96

5) ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow 2.38

6) TRIETHANOLAMINE

☐ Degradation : DOC 82 %

☐ n-octanol water partition coefficient : No data available

7) ETHANOLAMINE

☐ Degradation : DOC > 90 %

☐ n-octanol water partition coefficient : log Kow -1.91

8) TALL OIL

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow 5.4

9) HEXANOIC ACID, 6,6',6 -(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow 4.33

10) GLYCERIN

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow -1.75

11) BORIC ACID (H3BO3)

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow -1.09

12) Substance1

☐ Degradation : No data available

☐ n-octanol water partition coefficient : No data available

13) Substance2

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow 3.4

14) Substance3

☐ Degradation : No data available

☐ n-octanol water partition coefficient : log Kow 1.45

15) Substance4

- ☐ Degradation : No data available
- ☐ n-octanol water partition coefficient : log Kow 1.44

3. Bioaccumulative potential

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : BOD 6 %

2) WATER

- ☐ Bioaccumulation : No
- ☐ Biodegradation : No data available

3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : BOD 80 %

4) ISOPROPANOLAMINE

- ☐ Bioaccumulation : BCF 0.11
- ☐ Biodegradation : BOD 46 %

5) ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : No data available

6) TRIETHANOLAMINE

- ☐ Bioaccumulation : BCF < 0.4 Fish
- ☐ Biodegradation : BOD 1.3

7) ETHANOLAMINE

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : BOD 64 %

8) TALL OIL

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : BOD 60 %

9) HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : No data available

10) GLYCERIN

- ☐ Bioaccumulation : No data available

- ☐ Biodegradation : Readily biodegradable

11) BORIC ACID (H₃BO₃)

- ☐ Bioaccumulation : BCF 0 Fish
- ☐ Biodegradation : No data available

12) Substance1

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : BOD > 90 %

13) Substance2

- ☐ Bioaccumulation : BCF 230
- ☐ Biodegradation : No data available

14) Substance3

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : BOD 0 %

15) Substance4

- ☐ Bioaccumulation : No data available
- ☐ Biodegradation : No data available

4. Mobility in soil

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- No data available

2) WATER

- No data available

3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-

- No data available

4) ISOPROPANOLAMINE

- Koc 1.789

5) ALCOHOLS, C₁₁₋₁₅-SECONDARY, ETHOXYLATED

- No data available

6) TRIETHANOLAMINE

- Koc 7

7) ETHANOLAMINE

- Koc 1.167

8) TALL OIL

- No data available

9) HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-

- No data available

10) GLYCERIN

– No data available

11) BORIC ACID (H₃BO₃)

– Koc >= 62

12) Substance1

– No data available

13) Substance2

– Koc 985

14) Substance3

– No data available

15) Substance4

– Koc 145

5. Other adverse effects

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

– No data available

2) WATER

– No data available

3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-

– No data available

4) ISOPROPANOLAMINE

– No data available

5) ALCOHOLS, C₁₁-15-SECONDARY, ETHOXYLATED

– No data available

6) TRIETHANOLAMINE

– No data available

7) ETHANOLAMINE

– No data available

8) TALL OIL

– No data available

9) HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-

– No data available

10) GLYCERIN

– No data available

11) BORIC ACID (H₃BO₃)

– No data available

12) Substance1

– No data available

13) Substance2

- No data available

14) Substance3

- No data available

15) Substance4

- No data available

13. DISPOSAL CONSIDERATIONS

1. Disposal methods

- Every commercial waste producer shall either treat wastes generated from his/her place of business by him/herself or commission the treatment of such wastes to a person who has license for a waste treatment business under Article 26(3), a person who recycles of such wastes under Article 44(2), a person who has installed and operates a waste disposal facility under Article 4 or 5, a person who has completed the registration of a business of discharging wastes into the sea under Article 18 of the Marine Environment Management Act

2. Precautions (including disposal of contaminated container or package).

- Dispose of contents/container to ...
- Do not allow spill material to enter sewers, storm water drains, soil, etc.
- Empty containers may explode and residues can be ignited when pressured, cut, weld, heated.
- Empty containers may rupture when pressured.
- Empty containers recycled under environmental laws.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

14. TRANSPORT INFORMATION

1. UN No : Not Classified

2. Proper shipping name : Not Classified

3. Class or division : Not Classified

4. Packing group : Not Classified

5. Marine pollutant : Not Classified

6. Special safety response for transportation or transportation measure :

- ☐ Emergency measures in case of fire : Not Classified
- ☐ Emergency measures in the effluent : Not Classified

15. REGULATORY INFORMATION

1. Occupational safety and health act

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- Not classified

2) WATER

- Not classified

- 3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-
 - Not classified
- 4) ISOPROPANOLAMINE
 - Not classified
- 5) ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED
 - Not classified
- 6) TRIETHANOLAMINE
 - Not classified
- 7) ETHANOLAMINE
 - Threshold Limit Values (TLVs) chemicals, Hazardous Substances Subject to
- 8) TALL OIL
 - Not classified
- 9) HEXANOIC ACID, 6,6',6 -(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-
 - Not classified
- 10) GLYCERIN
 - Threshold Limit Values (TLVs) chemicals
- 11) BORIC ACID (H3BO3)
 - Not classified
- 12) Substance1
 - Not classified
- 13) Substance2
 - Not classified
- 14) Substance3
 - Not classified
- 15) Substance4
 - Not classified

2. Toxic chemical control act

- 1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC
 - Existing Chemical Substance
- 2) WATER

- Existing Chemical Substance
- 3) 9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-
 - Existing Chemical Substance
- 4) ISOPROPANOLAMINE
 - Existing Chemical Substance
- 5) ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED
 - Existing Chemical Substance
- 6) TRIETHANOLAMINE
 - Existing Chemical Substance
- 7) ETHANOLAMINE
 - Existing Chemical Substance
- 8) TALL OIL
 - Existing Chemical Substance
- 9) HEXANOIC ACID, 6,6',6 -(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-
 - Existing Chemical Substance
- 10) GLYCERIN
 - Existing Chemical Substance
- 11) BORIC ACID (H3BO3)
 - Pollutant Release and Transfer Registers, Existing Chemical Substance
- 12) Substance1
 - Existing Chemical Substance
- 13) Substance2
 - Existing Chemical Substance
- 14) Substance3
 - Existing Chemical Substance
- 15) Substance4
 - Existing Chemical Substance

5. Other regulations in Korea and overseas regulations

1) **DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : Carc.Cat.2; R45
 - EU Classification (Risk Phrases) : R45
 - EU Classification (Safety Phrases) : S:53-45

2) **WATER**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

3) **9-OCTADECENOIC ACID (Z)-, 2-ETHYL-2-[[(1-OXO-9-OCTADECENYL)OXY]METHYL]-1,3-PROPANEDIYL ESTER, (Z)-**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

4) **ISOPROPANOLAMINE**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : C; R34
 - EU Classification (Risk Phrases) : R34
 - EU Classification (Safety Phrases) : S:(1/2)-23-26-36-45

5) **ALCOHOLS, C11-15-SECONDARY, ETHOXYLATED**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

6) **TRIETHANOLAMINE**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

7) **ETHANOLAMINE**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : Xn; R20/21/22 C; R34
 - EU Classification (Risk Phrases) : R20/21/22, R34
 - EU Classification (Safety Phrases) : S:(1/2)-26-36/37/39-45

8) **TALL OIL**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

9) **HEXANOIC ACID, 6,6',6'-(1,3,5-TRIAZINE-2,4,6-TRIYLTRIIMINO)TRIS-**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

10) **GLYCERIN**

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

11) BORIC ACID (H3BO3)

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : Repr.Cat.2; R60-61
 - EU Classification (Risk Phrases) : R60-61
 - EU Classification (Safety Phrases) : S:53-45

12) Substance1

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : Xn; R22 C; R34 N; R50-53
 - EU Classification (Risk Phrases) : R22, R34, R50-53
 - EU Classification (Safety Phrases) : S:(1/2)-26-36/37/39-45-60-61

13) Substance2

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : C; R34
 - EU Classification (Risk Phrases) : R34
 - EU Classification (Safety Phrases) : S:(1/2)-26-28-36/37/39-45

14) Substance3

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations :
 - EU Classification (CLASSIFICATION) : Xn; R22 Xi; R38-41 R43 N; R50
 - EU Classification (Risk Phrases) : R22, R38-41, R43, R50
 - EU Classification (Safety Phrases) : S:(2)-24-26-37/39-61

15) Substance4

- ☐ Other regulation (Domestic) : Not classified
- ☐ National regulations : Not classified

16. OTHER INFORMATION

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2. Prepare date : 2018-01-09

3. Revised date

4. Other

fill out based on the standard of the Ministry of Employment and Laborabout data, GHS, MSDS.