

Product: **CRAYAMID® 115**

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SDS No.: 210213-001 (Version 7.0)

Date 16.03.2015 (*Cancel and replace* : 16.12.2013)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the product

Substance name: CRAYAMID® 115

REACH Registration Number: According to REACH regulation, article 2(9), the substance does not require registration.

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

Use of the Substance/Mixture : Paint, Coatings, Inks, Adhesives

1.3. Details of the supplier of the safety data sheet

Supplier	Arkema Coating Resins 420 rue d'Estienne d'Orves 92705 Colombes Cedex, FRANCE Telephone: +33 1 49 00 80 80 Telefax: +33 1 49 00 83 96 http://www.arkema.com
E-mail address	pars-drp-fds@arkema.com

1.4. Emergency telephone number

+ 33 1 49 00 77 77
European emergency phone number: 112
UK: National Chemical Emergency Centre Tel: 01865 407 333

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):

Serious eye damage, 1, H318
Skin sensitisation, 1, H317
Skin irritation, 2, H315
Chronic aquatic toxicity, 2, H411

Classification (Directive 67/548/EEC):

; R43
Xi; R38 R41
N; R51/53

Additional information:

For the full text of the R, H, EUH-phrases mentioned in this Section, see Section 16.

2.2. Label elements

Label elements (REGULATION (EC) No 1272/2008):

Hazardous components which must be listed on the label:

CAS-No. : 68082-29-1

Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H411 : Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P280 : Wear protective gloves/protective clothing/eye protection/face protection.
P273 : Avoid release to the environment.

Response:

P310 : Immediately call a POISON CENTER or doctor/ physician.
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 : If eye irritation persists: Get medical advice/ attention.

Disposal:

P501 : Dispose of contents/ container to an approved waste disposal plant.

2.3. Other hazards

Potential health effects:

Inhalation: At high vapour/fog concentrations : Risk of irritation of respiratory system
Skin contact: Irritating to skin. May cause sensitisation by skin contact.
Eye contact: Risk of serious damage to eyes.

Environmental Effects:

Toxic to fish. Toxic to daphnia. Toxic to algae.

Physical and chemical hazards:

Formation of toxic products through combustion
Decomposition products: See chapter 10

Other:

Results of PBT and vPvB assessment : According to REACH regulation, article 2(9), the substance does not require registration.
Therefore, this information is not required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1.Substances

POLYAMIDE RESIN

Chemical Name ¹	EC-No.	CAS-No.	Concentration	Classification Directive 67/548/EEC	Classification REGULATION (EC) No 1272/2008
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	-	68082-29-1	~ 100 %	Xi; R38 Xi; R41 R43 N; R51/53	Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic2; H411

Contains :

Chemical Name ¹	EC-No.	CAS-No.	Concentration	Classification Directive 67/548/EEC	Classification REGULATION (EC) No 1272/2008
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	500-191-5	68082-29-1	< 25 %	Xi; R38 Xi; R41 R43 N; R51/53	Skin Irrit.2; H315 Skin Sens.1; H317 Eye Dam.1; H318 Aquatic Chronic2; H411
Amines, polyethylenepoly-, triethylenetetramine fraction	292-588-2	90640-67-8	< 1,1 %	Xn; R21/22 C; R34 Xi; R43 N; R52/53	Acute Tox.4 (Oral); H302 Acute Tox.4 (Dermal); H312 Skin Corr.1B; H314 Skin Sens.1; H317 Eye Dam.1; H318 Aquatic Chronic3; H412

¹: See chapter 14 for Proper Shipping Name

4. FIRST AID MEASURES

4.1. & 4.2. Description of necessary first-aid measures & Most important symptoms/effects, acute and delayed:

General advice:

Take off immediately all contaminated clothing, including shoes.

Inhalation:

Move patient from contaminated area to fresh air. In case of persistent problems : Consult a physician.

Skin contact:

Wash immediately, abundantly and thoroughly with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact:

Wash open eyes immediately, abundantly and thoroughly for at least 15 minutes. Consult an ophthalmologist immediately.

Ingestion:

Do NOT induce vomiting. Consult a physician.

Protection of first-aiders:

Protective suit. In case of insufficient ventilation, wear suitable respiratory equipment.

4.3. Indication of immediate medical attention and special treatment needed, if necessary : No data available.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Water mist, foam, Carbon dioxide (CO₂)

Unsuitable extinguishing media: High volume water jet

5.2. Special hazards arising from the substance or mixture:

In case of fire and/or explosion do not breathe fumes.

Formation of toxic products through combustion:

Carbon oxides, hydrocarbon fumes, Nitrogen oxides

5.3. Advice for firefighters:

Specific methods:

Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses.

Special protective actions for fire-fighters:

In the event of fire, wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Prohibit contact with eyes. Avoid contact with skin. Avoid inhalation of vapours. Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Prohibit all sources of sparks and ignition - Do not smoke.

6.2. Environmental precautions:

Do not flush into surface water or sanitary sewer system. Do not release into the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up:

Methods for cleaning up:

After cleaning, flush away traces with water. Recover waste water for processing later.

Recovery:

Shovel into suitable container for disposal. Never return spills in original containers for re-use. Absorb the remainder with an inert absorbent material (sand, vermiculite, perlite).

Elimination: See chapter 13

6.4. **Reference to other sections:** None.

7. HANDLING AND STORAGE

7.1. **Precautions for safe handling:**

Technical measures/Precautions:

Storage and handling precautions applicable to products: Liquid. Irritant even corrosive. Dangerous for the environment. Provide appropriate exhaust ventilation at machinery. Provide showers, eye-baths.

Safe handling advice:

Remove all sources of ignition. In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures:

Take off immediately all contaminated clothing. Prohibit contact with eyes. Avoid contact with skin. Avoid inhalation of vapours. When using do not eat, drink or smoke.

Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. **Conditions for safe storage, including any incompatibilities:**

Keep in a dry, cool and well-ventilated place. Store in original container. Keep container tightly closed. Keep away from heat and sources of ignition. Do not smoke. Provide electrical earthing of equipment. Avoid long storage period. Store away from frost. Provide a catch-tank in a bunded area. Provide impermeable floor.

Incompatible products:

Strong acids Bases Oxidizing agents

Packaging material:

Recommended: Lined metallic drums.

To be avoided: Metallic drums.

7.3. **Specific end use(s):** None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters:**

Exposure Limit Values Not relevant

Derived No Effect Level (DNEL):

This information is not required.

Predicted No Effect Concentration:

This information is not required.

8.2. **Exposure controls:**

Appropriate engineering controls: Frequently monitor and control the working atmosphere. Provide appropriate exhaust ventilation at machinery.

Personal protective equipment:

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment In the case of hazardous fumes, wear self contained breathing apparatus.
Hand protection:	Protective gloves
Eye/face protection:	Tightly fitting safety goggles, Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection:	Protective suit

Environmental exposure controls: See chapter 6

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. **Information on basic physical and chemical properties**

Appearance:

Physical state (20°C):	liquid
Colour:	amber, clear
Odour:	Amine-like
Olfactory threshold:	No data available.
pH:	No data available.
Melting point/range:	No data available.
Boiling point/boiling range:	No data available.

Flash point:	closed cup: estimated > 100 °C (Seta CC method)
Evaporation rate:	No data available.
Flammability (solid, gas):	
Flammability:	Not relevant
Vapour pressure:	No data available.
Vapour density:	No data available.
Density:	0,97 g/cm ³ , at 20 °C
Water solubility:	No data available.
Partition coefficient: n-octanol/water:	FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :log Kow : 10,34 (calculated) AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :log Kow : -2,65 (calculated)
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity, dynamic:	50.000 - 60.000 mPa.s , at 40 °C (Brookfield)
Explosive properties:	
Explosivity:	Not relevant
Oxidizing properties:	Not applicable

9.2. Other data:

Solubility in other solvents: Soluble in most organic solvents

10. STABILITY AND REACTIVITY

10.1. & 10.2. Reactivity & Chemical stability:

The product is stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions:

None under normal conditions of use.

10.4. Conditions to avoid:

Store protected from moisture and heat. Store away from frost.

10.5. Incompatible materials to avoid:

Strong acids, Bases, Oxidizing agents

10.6. Hazardous decomposition products:

Formation of toxic products through combustion:
Carbon oxides, hydrocarbon fumes, Nitrogen oxides

11. TOXICOLOGICAL INFORMATION

All available data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

11.1. Information on toxicological effects:

Acute toxicity:

Inhalation: According to its composition, this product should not be harmful in normal conditions of use

Ingestion: According to its composition, this product should not be harmful in normal conditions of use

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :
May be considered as comparable to a similar product for which experimental results are:

• In animals : LD50/Rat: 1.716 mg/kg (Method: OECD Test Guideline 401)

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

• In animals : No mortality/Rat: 2.000 mg/kg (Method: OECD Test Guideline 423) , No specific toxic effects

Dermal: According to its composition, this product should not be harmful in normal conditions of use

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :
May be considered as comparable to a similar product for which experimental results are:

- In animals : LD50/Rabbit: 1.465 mg/kg (Method: OECD Test Guideline 402)
FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :
- In animals : No mortality/Rabbit: 2.000 mg/kg (Method: OECD Test Guideline 402), No specific toxic effects

Local effects (Corrosion / Irritation / Serious eye damage):

Skin contact: From its composition, it must be considered as: **Irritating to skin.**

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

Skin irritation (OECD Test Guideline 439, In vitro)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:

- In animals : Severely irritating, or even corrosive, to skin (OECD Test Guideline 404, Rabbit)

Eye contact: According to its composition : **Risk of serious damage to eyes.**

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

- In animals : Severe eye irritation (OECD Test Guideline 405, Rabbit)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:

- In animals : Severely irritating, or even corrosive, to eyes (OECD Test Guideline 405, Rabbit)

Respiratory or skin sensitisation:

Inhalation: No data available.

Skin contact: According to its composition, can be considered as : **May cause sensitisation by skin contact.**

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:

- In animals : Sensitizing effects by skin contact. (Method : OECD Test Guideline 406 Buehler Test, Guinea pig)

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

- In animals : Strong sensitizing effects by skin contact. (Method : OECD Test Guideline 429 LLNA: Local Lymph Node Assay, Mouse)

CMR effects :

Mutagenicity: Available experimental data indicates no particular problems for man

In vitro

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:

In vitro gene mutation study in bacteria: Active (Method: OECD Test Guideline 471)
In vitro gene mutations test on mammalian cells: Active (Method: OECD Test Guideline 476)

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

In vitro gene mutation study in bacteria: Inactive (Method: OECD Test Guideline 471)
In vitro mammalian cell gene mutation test: Inactive (Method: OECD Test Guideline 476)
in vitro mammalian cell micronucleus test: Inactive (Method: OECD Test Guideline 487)

In vivo

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:
In vivo micronucleus test: Inactive (Method: OECD Test Guideline 474)

Carcinogenicity: Based on the available data, the substance is not suspected of having carcinogenic potential

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:

- In animals : Absence of carcinogenic effects (Method: OECD Test Guideline 451, male mouse, dermal route)2%

Reproductive toxicity:

Fertility:

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

• In animals : No toxic effects for reproduction
NOAEL (Parental toxicity) : ≥ 1.000 mg/kg bw/day
NOAEL (Fertility) : ≥ 1.000 mg/kg bw/day
(Method: OECD Test Guideline 422, Rat, By oral route, 12 Weeks)

Foetal development: **Based on the available data, the substance is not suspected of having developmental toxicity potential.**

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:
• In animals : Absence of toxic effects for foetal development
NOAEL (Developmental Toxicity) : 750 mg/kg bw/day
NOAEL (Maternal Toxicity) : 750 mg/kg bw/day
(Method: OECD Test Guideline 414, Rat, By oral route)

Specific target organ toxicity :

Single exposure :

Inhalation: **According to its composition : At high vapour/fog concentrations : Possible irritation of respiratory system**

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

• In man : At high vapour/fog concentrations : , Risk of irritation of respiratory system

Repeated exposure:

Based on available data, the classification criteria are not met.

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

May be considered as comparable to a similar product for which experimental results are:

• In animals : By oral route: Target organs: Lungs, NOAEL= 50mg/kg bw/day, LOAEL= 175mg/kg bw/day (Method: OECD Test Guideline 408, Rat, 3 months)

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

• In animals : By oral route: No specific toxic effects
NOAEL= ≥ 1000 mg/kg bw/day (Method: OECD Test Guideline 422, Rat, 12 Weeks)

Aspiration hazard:

Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicology Assessment: All available data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

Acute aquatic toxicity : Toxic to aquatic life.
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

12.1. Acute toxicity :

Fish: **According to its composition, can be considered as : Toxic to fish.**

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

LC50, 96 h (Danio rerio (zebra fish)) : 7,07 mg/l (Method: OECD Test Guideline 203)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Through analogy with a comparable product :

ETHYLENE AMINES :

LC50, 96 h (Pimephales promelas) : 330 mg/l (Method: US EPA)

Aquatic invertebrates: **According to its composition, can be considered as : Toxic to daphnia.**

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

EC50, 48 h (Daphnia magna (Water flea)) : 7,07 mg/l (Method: OECD Test Guideline 202)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Through analogy with a comparable product :

ETHYLENE AMINES :

EC50, 48 h (Daphnia magna (Water flea)) : 31,1 mg/l (Method: No information available.)

Aquatic plants: **According to its composition, can be considered as : Toxic to algae.**

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

EC50, 72 h (Pseudokirchneriella subcapitata) : 4,34 mg/l (Method: OECD Test Guideline 201)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Through analogy with a comparable product :

ETHYLENE AMINES :

EC50, 72 h (Pseudokirchneriella subcapitata (microalgae)) : 20 mg/l (Method: OECD Test Guideline 201, Growth inhibition)

Microorganisms:

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

3 h (Activated sludge) : 384 mg/l (Method: OECD Test Guideline 209)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Through analogy with a comparable product :

ETHYLENE AMINES :

EC20, 30 min : 60 mg/l (Method: No data available)

Aquatic toxicity / Long term toxicity:

Aquatic invertebrates:

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Through analogy with a comparable product :

ETHYLENE AMINES :

EC10, 21 d (Daphnia magna (Water flea)) : 1,9 mg/l (Method: OECD Test Guideline 202 - Part 2, reproduction)

Aquatic plants:

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

EC10, 72 h (Pseudokirchneriella subcapitata) : 1,78 mg/l (Method: OECD Test Guideline 201)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Through analogy with a comparable product :

ETHYLENE AMINES :

NOEC, 72 h (Pseudokirchneriella subcapitata) : 2,5 mg/l (Method: OECD Test Guideline 201, Growth inhibition)

12.2. Persistence and degradability :

Biodegradation (In water):

Based on the available information, it is not possible to conclude on the hazard potential of this product.

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

No data available 4 % after 28 d

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

0 % after 162 d (Method: OECD Test Guideline 301 D)

20 % after 84 d (Method: OECD Test Guideline 302)

12.3. Bioaccumulative potential :

Bioaccumulation:

According to its composition, can be considered as : Potentially bioaccumulable.

FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE :

Partition coefficient: n-octanol/water: log Kow : 10,34 (Method: calculated)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION :

Partition coefficient: n-octanol/water: log Kow : -2,65 (Method: calculated)

12.4. Mobility in soil - Distribution among environmental compartments: No data available.

12.5. Results of PBT and vPvB assessment :

According to REACH regulation, article 2(9), the substance does not require registration. Therefore, this information is not required.

12.6. Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment:

Disposal of product: The product should not be allowed to enter drains, water courses or the soil. Dispose of contents/ container to an approved waste disposal plant. In accordance with local and national regulations.

Disposal of packaging: Recycle if possible.

14. TRANSPORT INFORMATION

Regulation	UN number	Proper shipping name	Class	Label	PG	Environmentally hazardous	Other information
ADR	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE)	9	9	III	yes	
RID	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE)	9	9	III	yes	
IATA Cargo	3082	Environmentally hazardous substance, liquid, n.o.s. (Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine)	9	9MI	III	yes	
IATA Passenger	3082	Environmentally hazardous substance, liquid, n.o.s. (Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine)	9	9MI	III	yes	
IMDG	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FATTY ACIDS, C18-UNSATD., DIMERS, OLIGOMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE)	9	9	III	Marine pollutant	EmS Number: F-A, S-F Mark: MP

15. REGULATORY INFORMATION

Safety data sheets: according to Regulation (EC) No. 1907/2006

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

Additional regulations (European Union) :

Hazardous Waste Regulations 2005

Applies

The Control of substances Hazardous to Health Regulations 2002 (as amended)

Banned and/or restricted

UK REGULATION

Chip3: Chemical (Hazard Information and Packaging for Supply) Regulations 2002

Major Accident Hazard Legislation

Dangerous for the environment 9b

15.2. Chemical Safety Assessment:

This information is not required.

INVENTORIES:

EINECS:	Conforms to
TSCA:	Conforms to
DSL:	All components of this product are on the Canadian DSL.
IECSC (CN):	Conforms to
KECI (KR):	Conforms to
PICCS (PH):	Conforms to
AICS:	Conforms to
NZIOC:	Conforms to

16. OTHER INFORMATION

Full text of R, H, EUH-phrases referred to under sections 2 and 3

R21/22	Harmful in contact with skin and if swallowed.
R34	Causes burns.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Thesaurus:

NOAEL : No Observed Adverse Effect Level (NOAEL)
LOAEL : Lowest Observed Adverse Effect Level (LOAEL)
bw : Body weight
food : oral feed
dw : Dry weight
vPvB : very Persistent and very Bioaccumulative
PBT : Persistent, Bioaccumulative and Toxic

This information applies to the PRODUCT AS SUCH and conforming to specifications of ARKEMA. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).