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

Generic Safety Data Sheet

1.1. Identification of the product

Identification of the mixture: PLATAMID® M 1657

Grades : M 1657 TA, M 1657 FA, M 1657 F

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

Use of the Substance/Mixture : Textile, Hotmelt adhesives and coatings

1.3. Details of the supplier of the safety data sheet

Supplier	Arkema POLYAMIDES DE SPECIALITES 420 rue d'Estienne d'Orves 92705 Colombes Cedex, France Téléphone : +33 (0)1 49 00 80 80 Télécopie : +33 (0)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

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008):
This mixture is not classified as dangerous according to Regulation (EC) No 1272/2008.

Classification according to EU Directives 1999/45/EC :

This mixture is not classified as dangerous according to Directive 1999/45/EC.

2.2. Label elements

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

This mixture does not require a label.

2.3. Other hazards

Potential health effects:
Acute exposure: Contact with the product, when handled at high temperatures, can cause serious burns.
Skin contact: Possible irritation of skin.
Eye contact: Possible irritation of eyes

Physical and chemical hazards:
Thermal decomposition giving toxic and corrosive products.
Decomposition products: See chapter 10

Other:
Results of PBT and vPvB assessment : This information is not required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical nature of the mixture[1]:
Copolyamide of high molecular weight

Hazardous impurities :

Chemical Name[1]	EC-No.	CAS-No.	Concentration	Classification Directive 67/548/EEC	Classification Regulation (EC) No 1272/2008
Caprolactam	203-313-2	105-60-2	< 2,2 %	Xi; R36/37/38 Xn; R20/22	Acute Tox. 4 (Oral); H302 Acute Tox. 4 (Inhalation); H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3 (Inhalation); H335

[1]: See chapter 14 for Proper Shipping Name
[2] :See the text of the regulation for applicable exceptions or provisions : The transition time according to REACH Regulation, Article 23, is still not expired.
For the full text of the R, H, EUH-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

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

Inhalation:
Inhalation of vapours due to thermal decomposition : Oxygen or artificial respiration if needed. Move to fresh air. In case of persistent problems : Consult a physician.

Skin contact:
Wash immediately, abundantly and thoroughly with soap and water.
On contact with hot product : Cool skin rapidly with cold water after contact with molten material. In case of adhesion, do not try to remove the product. Treat the affected areas as thermal burns. Consult a physician.

Eye contact:
Wash immediately, abundantly and thoroughly with water. If irritation persists, consult an ophthalmologist.
On contact with hot product : Cool eyes rapidly with cold water after contact with molten polymer. Consult an ophthalmologist immediately.

Ingestion:
In case of problems : Consult a doctor.

Protection of first-aiders:
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: Foam, Water spray, Carbon dioxide (CO2)

Unsuitable extinguishing media: High volume water jet

5.2. Special hazards arising from the substance or mixture:

Thermal decomposition giving toxic and corrosive products :
Carbon monoxide, Ammonia, Amino derivatives
Temperature exceeding 500 °C :
Formation of toxic products through combustion:
Carbon oxides, Hydrogen cyanide (hydrocyanic acid), (traces)

5.3. Advice for firefighters:

Specific methods:
Ensure a system for the rapid emptying of containers. In case of fire nearby, remove the bags.

Special protective actions for fire-fighters:
In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:
Avoid contact with skin and eyes and inhalation of dust. Wear a dust mask and safety glasses/goggles if necessary. In case of insufficient ventilation, wear suitable respiratory equipment.

6.2. Environmental precautions:
Do not release into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up:

Recovery:
Recover the product. Sweep up to prevent slipping hazard.

Elimination:
Destroy the product by incineration (in accordance with local and national regulations).

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: Solid (pellets).
Ensure ventilation of work areas and extraction of dust or vapours likely to be given off during conversion operations (product handled when hot). Provide showers, eye-baths. Provide water supplies near the point of use.

Safe handling advice:
At all stages of the operation, do not exceed the temperature at which decomposition into toxic and corrosive products will occur. Prohibit all sources of sparks and ignition - Do not smoke. Avoid the formation and deposition of dust. In case of dust formation, wear a dust mask. Avoid accumulation of static charges during transfers in metallic systems. Keep well away from naked flames.

Hygiene measures:
Avoid contact with the skin and the eyes. Avoid breathing dust. Product handled when hot : 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:
Store away from moisture and heat to maintain the technical properties of the product. Protect against light. Remove all sources of ignition. Provide earthing and safe electrical equipment.

Do not store above: 60 °C

Incompatible products:
Strong oxidizing agents, Strong acids

Packaging material:
Recommended: Paper bags lined with polyethylene, Cardboard lined with polyethylene liner

7.3. Specific end use(s): None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure Limit Values

Caprolactam

Source	Date	Value type	Value (ppm)	Value (mg/m3)	Remarks
ACGIH (US)	01 2006	TWA	–	5	Inhalable fraction and vapor.

Derived No Effect Level (DNEL):
This information is not required.

Predicted No Effect Concentration:
This information is not required.

8.2. Exposure controls:

General protective measures: Ensure ventilation of work areas and extraction of dust or vapours likely to be given off during conversion operations (product handled when hot).

Personal protective equipment:

Respiratory protection:	Product handled when hot : In case of insufficient ventilation, wear suitable respiratory equipment. In the case of hazardous fumes, wear self contained breathing apparatus.
Hand protection:	Gloves (product handled when hot)
Eye/face protection:	Safety glasses/goggles (product handled in molten state) - Wear face-shield and protective clothing in case of problems during processing
Skin and body protection:	Boots (product handled in molten state)

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):	solid
Form:	granules
Colour:	colourless, translucent, or, transparent
Odour:	none
Olfactory threshold:	No data available.
pH:	No data available.
Melting point/range :	110 - 115 °C
Boiling point/boiling range:	No data available.
Flash point:	not applicable
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Vapour pressure:	No data available.
Vapour density:	No data available.
Density:	1.100 kg/m3 , at 20 °C
Water solubility:	insoluble at 20 °C
Partition coefficient: n-octanol/water:	CAPROLACTAM : log Kow : = 0,12 , at 25 °C, Not bioaccumulable (OECD Test Guideline 107)
Auto-ignition temperature:	> 470 °C (Standard DIN 51 794)
Decomposition temperature:	> 260 °C
Viscosity:	No data available.
Explosive properties:	
Explosivity:	Not relevant (due to the chemical structure)
Oxidizing properties:	Not relevant (due to the chemical structure)

9.2. Other data:

Solubility in other solvents: Soluble in: PHENOL, METACRESOL, BENZYL ALCOHOL(when hot) , Formic acid (concentrate), Sulphuric acid (concentrate)

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:
Temperatures above 60 °C
(to maintain the technical properties of the product).
Avoid storing in moist and warm conditions. Remove all sources of ignition.

10.5. Incompatible materials to avoid:
Strong acids and oxidizing agents

10.6. Hazardous decomposition products:

Thermal decomposition:
Decomposition temperature: > 260 °C
Thermal decomposition giving toxic and corrosive products :
Carbon monoxide, Ammonia, Amino derivatives
Temperature exceeding 500 °C :
Formation of toxic products through combustion:
Carbon oxides, Hydrogen cyanide (hydrocyanic acid), (traces)

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:

Inhalation: **According to its composition, can be considered as : Slightly harmful by inhalation**

CAPROLACTAM :
• In animals : Dusts :
LC50/4 h/rat: 8,16 mg/l, Aerosol

Ingestion: **According to its composition, can be considered as : Slightly harmful by ingestion**

CAPROLACTAM :
LD50/rat: 1.475 - 1.876 mg/kg

Dermal: **According to its composition, can be considered as : Slightly harmful in contact with skin**

CAPROLACTAM :
LD50/rabbit: > 2.000 mg/kg

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

Skin contact: **According to its composition : May cause skin irritation.**
• In man : Prolonged and/or repeated contacts, Possible irritation of skin.
Contact with the product, when handled at high temperatures, can cause serious burns.
At high temperature, products of thermal decomposition can be irritating to skin

CAPROLACTAM :
Dermatitis possible through repeated contact (human)
• In animals : May cause skin irritation.

Eye contact: **According to its composition : May cause eye irritation.**
• In man : Contact with the product, when handled at high temperatures, can cause serious burns.
At high temperature, products of thermal decomposition can be irritating to eyes

CAPROLACTAM :
• In man : Irritating to eyes.

Respiratory or skin sensitisation:

Inhalation: No data available.

Skin contact: **According to its composition, can be considered as : Not a skin sensitizer**

CMR effects : **Polymer: No particular problems for man**

Specific target organ toxicity :
Single exposure :

Inhalation:
• In man : At high temperature, products of thermal decomposition can be irritating to respiratory system

Repeated exposure: **Polymer: No particular problems for man**

CAPROLACTAM :
By inhalation: No adverse effects reported.
NOAEL= 49mg/kg bw/day (rat, 3 months)

Aspiration hazard: Not relevant

12. ECOLOGICAL INFORMATION

12.1. Toxicity :

Fish: **According to its composition : , Slightly harmful to fish**

CAPROLACTAM :

LC50, 96 h (Oryzias latipes) : > 100 mg/l

Aquatic invertebrates: **According to its composition : , Slightly harmful to daphnia**

CAPROLACTAM :

EC50, 48 h (Daphnia magna (Water flea)) : > 1.000 mg/l (Method: OECD Test Guideline 202)

Aquatic plants: **According to its composition : , Slightly harmful to algae**

CAPROLACTAM :

EC50, 72 h (Selenastrum capricornutum) : > 1.000 mg/l (Method: OECD Test Guideline 201)

Microorganisms:

CAPROLACTAM :

EC10, 17 h (Pseudomonas putida) : = 1.737 mg/l
EC50, 17 h (Pseudomonas putida) : = 4.240 mg/l

12.2. Persistence and degradability :

Biodegradation (In water): **Inert polymer , Not biodegradable on the basis of its structure**

CAPROLACTAM :

Readily biodegradable
82 % after 14 d (Method: OECD Test Guideline 301 C)

12.3. Bioaccumulative potential :

CAPROLACTAM :

Partition coefficient: n-octanol/water: log Kow : = 0,12 , at 25 °C, Not bioaccumulable (Method: OECD Test Guideline 107)

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

12.5. Results of PBT and vPvB assessment :

This information is not required.

12.6. Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment:

Disposal of product: Do not dispose of waste into sewer. Recycle if possible. Destroy the product by incineration (in accordance with local and national regulations).

Disposal of packaging: Do not release into the environment. Recycle if possible. Destroy packaging by incineration at an approved waste disposal site (in accordance with local and national regulations).

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Safety data sheets: according to Regulation (EC) No. 1907/2006 and its amendment (453/2010)

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

15.2. Chemical Safety Assessment:
This information is not required.

INVENTORIES:

EINECS:	Conforms to
TSCA:	Does not conform
AICS:	Does not conform
DSL:	This product contains one or several components that are not on the Canadian DSL nor NDSL lists.
ENCS (JP):	Does not conform
KECI (KR):	Does not conform
PICCS (PH):	Does not conform
IECSC (CN):	Does not conform

16. OTHER INFORMATION

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

R20/22	Harmful by inhalation and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Update:

Safety datasheet sections which have been updated:		Type:
	General update of Safety Data Sheet.	

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).