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**EU-MATERIAL SAFETY DATA SHEET**

according to guidelines 91/155/EWG

issue 064/05 from 17.03.04  
replaces 064/04  
page 1 of 4

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**NYLON 6 CAST (NATURAL)**

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**1.1 MATERIAL/PRODUCT IDENTIFICATION**

TRADENAME: NYLON 6 CAST (NATURAL)

**1.2 COMPANY IDENTIFICATION**

Direct Plastics Online  
Unit 7, Portland Business Park  
Richmond Park Road  
Sheffield  
S13 8HS  
Tel. 0845 838 3318

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**2.1 COMPOSITION**

CHEMICAL COMPOSITION: Based on polyamide 6 (polymer on  $\epsilon$ -caprolactam), possibly containing pigments, dyes and additives.

**2.2 INFORMATION ON INGREDIENTS**

The proportion of monomer ( $\epsilon$ -caprolactam) is max. 2 - 3 %.

$\epsilon$ -caprolactam: CAS-Nr. 105-60-2  
 $X_n$  - noxious  
R20/22: Harmful by inhalation and if swallowed  
R36/37/38: Irritating to eyes, respiratory system and skin

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**3. POTENTIAL RISKS**

This product is not harmful.

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**4. FIRST AID MEASURES**

INHALATION: After accidental inhalation of fumes or thermal decomposition products, using self-protection, remove the person from the danger zone and apply artificial respiration if necessary. Seek medical help and keep quiet and warm.

SKIN CONTACT: After contact with molten polymer, immediately cool with cold water for a prolonged time. Remove affected clothing. Do not peel polymer from skin. Cover burns with sterile dressings. Obtain medical attention.

EYE CONTACT: If a foreign body (splinter, chip) enters the eye do not rub. Rinse immediately with plenty of water. Seek medical attention.

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replaces 064/04

page 2 of 4

---

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**5. FIRE FIGHTING MEASURES**

SUITABLE EXTINGUISHING MEDIA:

Water, foam, dry powder, carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA:

None known

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTING:

Wear self contained breathing apparatus.

ADDITIONAL ADVICE:

This product ignites in a flame and continues to burn on removal of the source. With thermal decomposition toxic and combustible gasses and steam are released.

There is a danger of the fire spreading through spontaneous ignition of the gaseous decomposition products. Molten product must therefore be cooled with water.

Water used to extinguish the fire and fire remainders must be collected. Fire hydrants must be controlled and water disposed of, in accordance with local regulations.

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**6. ACCIDENTAL RELEASE MEASURES**

ENVIRONMENTAL PRECAUTIONS:

Before entry of swarf waste to sewage it should be mechanically cleaned of product remainders.

METHODS FOR CLEANING UP:

Mechanical

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**7.1 HANDLING**

GENERAL ADVICE:

Avoid overheating of material by improper handling.  
Avoid dust generation.

TECHNICAL MEASURES:

For mechanical operations local extraction / ventilation is recommended to ensure that less than the 8.1 limit is achieved. Where dust is produced, measures must be taken to avoid static electricity discharge.

**7.2 STORAGE**

GENERAL ADVICE:

The appropriate company regulations for fire prevention are to be followed.

SPECIAL REQUIREMENTS:

None.

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issue 064/05 from 17.03.04  
replaces 064/04

page 3 of 4

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**8.1 EXPOSURE CONTROLS**

GUIDELINES FOR MATERIALS WITHIN THE WORKINGPLACE:

For mechanical operations the following are to be observed (TRGS 900, Standard 2000:

Respirable dust:	MAC 6 mg/m <sup>3</sup>
ε-caprolactam (dust and vapours): (CAS 105-60-2)	MAC 5 mg/m <sup>3</sup> (measured as total dust), comment „Y“, no risk of embryo damage if MAC is observed.

**8.2 PERSONAL PROTECTION**

RESPIRATORY PROTECTION:	During dusty operations use respiratory protection (e.g. respiratory mask with a combination filter).
EYE PROTECTION:	For mechanical operations wear safety glasses with side pieces.
SKIN PROTECTION:	Skin protection should be used (barrier cream).
HYGIENE MEASURES:	General industrial hygiene regulations are to be observed. Wash hands before breaks and at the end of workday. Do not eat, drink or smoke in the workplace.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

FORM:	Solid (semifinished or finished parts)	
COLOUR:	Various, dependent on colourant	
ODOUR:	Odourless	
DENSITY (20 °C):	1,12 - 1,15 g/cm <sup>3</sup>	DIN 53479
MELTING POINT/RANGE:	210 - 220 °C	DIN 53736
DECOMPOSITION TEMPERATURE:	> 300 °C	DIN 53765-D-10
IGNITION TEMPERATURE:	> 400 °C	ASTM-D 1929
EXPLOSION LIMITS	Not applicable	
SOLUBILITY (20 °C):	Insoluble in water In organic solution applications insoluble	

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**10. STABILITY AND REACTIVITY**

CONDITIONS TO AVOID:	Temperatures > 300 °C (Start of the thermal decomposition)
SUBSTANCES TO AVOID:	Concentrated or strong acids, oxidizing media
HAZARDS DECOMPOSITION PRODUCTS:	With carbonization and incomplete combustion toxic gasses develop, predominantly carbon dioxide and carbon monoxide. In addition nitric oxide, amine, ammonia, ε-caprolactam, nitrile, aliphatic and aromatic hydrocarbons, aldehyde, hydrogen cyanide, sulphur dioxide can be generated, as well as small quantities of ketone and acids.
ADDITIONAL INFORMATION:	None

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**11. TOXICOLOGICAL INFORMATION**

With proper use and in accordance with regulations there are no known dangers to health.  
Contact with molten product can cause burns.

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page 4 of 4

---

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**12. ECOLOGICAL INFORMATION**

Because of insolubility in water separation by filtration or sedimentation is possible.

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**13. DISPOSAL CONSIDERATIONS**

Uncontaminated product can be recycled.

If no use is possible, product waste can, in accordance with official local regulations, be mixed with household waste or incinerated in an appropriate place.

Waste product code No. for uncontaminated product (valid for Germany): 57111 polyamide waste

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**14. TRANSPORT INFORMATION**

Not classified as dangerous in the meaning of transport regulations.

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**15.1 EU GUIDELINES**

No warning necessary.

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**16. OTHER INFORMATION**

This data sheet is valid for  
NYLON 6 CAST (NATURAL)

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This statement is valid for pure product. It is based on our current knowledge and offers no assurance of properties. It is the user's responsibility to ensure that existing legislation and regulations are followed.

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