

SAFETY DATA SHEET

PRODUCT NAME: Nylacast PA 6 Natural

Revised August 2019, in accordance with REACH regulations.

1. IDENTIFICATION OF PRODUCT/SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

IDENTIFICATION OF THE PRODUCT

TRADE NAME: Cast Nylon 6, white/cream

**COMPANY/
MANUFACTURER
IDENTIFICATION**

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2. HAZARDS IDENTIFICATION

**PARTICULAR INFORMATION PERTAINING TO
SPECIFIC RISK FOR HUMAN/ENVIRONMENT**

- Not classified as dangerous in accordance with EU Directive 1999/45/EC
- The product does not require a hazard warning label in accordance with Directive 67/548/EC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

**PARTICULAR INFORMATION PERTAINING TO
SPECIFIC RISK FOR HUMAN/ENVIRONMENT**

Chemical characterization: Cast Polyamide 6, cast nylon 6, white/cream
Description: Semi finished-product in shapes such as sheet, rods, plates, tubes and blocks, or as manufactured engineering components.
Composition: Polyamide 6.

4. ROUTE OF EXPOSURE AND FIRST AID MEASURES

ROUTE OF EXPOSURE

Skin Contact: Dust and particles generated during machining in contact with skin may cause irritation. Hot or molten polymer can burn the skin.
Eye Contact: Dust and fine particles generated during machining may cause mechanical irritation.
Inhalation: Dust, particles and chips can be generated during machining of cast shapes.
Dust: may irritate the mucous membranes of the nose and throat.
Vapor: from hot/molten product can cause irritation.
Ingestion: Ingestion is not likely root of exposure, although the generated dust, particles and chips could be swallowed.

FIRST AID PROCEDURE

Eye Contact: Wash affected eyes for at least 15 minutes under running water with eyelids open. If irritation develop or persists, obtain medical attention.
Skin Contact: Wash thoroughly with soap and water. For irritation, flush the skin with cool running water. Wash the affected area with mild soap and water. Obtain medical attention if irritation develop or persists.
If hot or molten polymer burns the skin, immerse the burned area in cold running water and obtain medical attention.
Inhalation: Remove person to a fresh air. If irritation develop or persists, obtain medical attention.
Ingestion: Use first aid techniques including coughing to remove obstruction. If swallowed, obtain medical attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water, foam, carbon dioxide.
Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: In the event of fire, the following toxic vapours can be released: Carbon dioxide, CO₂, carbon monoxide, CO, oxides of nitrogen, NO_x and traces of hydrogen cyanide, HCN and hydrogen sulphide/sulphur dioxide.
Special Protective Equipment for Fire-Fighters: Fire-fighters must use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to protective measures listed in section 7 and 8.
Environmental Precautions: Dispose in accordance with local and national regulations. Do not dispose into the drains/surface waters/ground waters. Small particles may present a physical ingestion hazard to wildlife.
Methods for Cleaning Up: Sweep/shovel up. Collect dust using a suitable vacuum system. Send in suitable containers for recycling or disposal.

7. HANDLING AND STORAGE

Handling: No special precautions are necessary beyond normal good industrial hygiene and safety practices. Handle heavier parts either with lifting equipment or sufficient manpower.
Engineering Measures: Provide suitable ventilation and dust-extraction system to minimize exposure. Use local mechanical exhaust ventilation at sources of air contamination such as processing equipment/ cutting machines.
Storage: Store in a dry place away from water and high relative humidity.

8. PERSONAL PROTECTION

Respiratory Protection: Use suitable respiratory protection equipment (NIOSH approved mask) when airborne exposure limits are reached or exceeded.
Hand Protection: This product does not present particular skin concern requiring special protection beyond normal good industrial hygiene and safety practices which include wearing suitable gloves to protect from abrasion and cutting.
Eye Protection: Eye contact with this solid product is unlikely. However in machining areas adequate eye protection (safety goggles) should be worn to protect from small particles generated by machining.
Skin Protection: Minimize skin contact by following good industrial hygiene and safety practices, although this product does not present significant skin concern.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM	Solid
APPEARANCE	Blocks, rods, tubes and sheets
COLOUR	White/cream
ODOUR	Odourless
MELTING TEMPERATURE	Temperature: 210 - 230°C
FLASH POINT	Estimated to be around 370°C
DENSITY	1.130 – 1.150 g/cm ³
SOLUBILITY IN WATER	Insoluble

10. STABILITY AND REACTIVITY

Conditions to avoid

Temperatures: above recommended service temperature may cause deformation of product

Materials to Avoid: Strong acids, strong oxidizing agents and certain salts may have detrimental effect on product. A Chemical Resistance Chart can be obtained with technical data for the material. In general, contact with solutions of pH >12 and <2 will cause deterioration of the material.

Hazardous Decomposition Products: Thermal decomposition occurs at temperatures above the melting temperature. Combustion products are: carbon dioxide, CO₂, carbon monoxide, CO, oxides of nitrogen, NO_x and traces of hydrogen cyanide, HCN.

11. TOXICOLOGICAL INFORMATION

As Cast Nylon 6 is insoluble in water, Nylacast has not conducted toxicity studies on this material and no toxicological information was obtained in an extensive search of the available scientific literature.

Nylacast has commissioned food contact studies of Cast Nylon 6 by external internationally accredited laboratories to relevant FDA and EU standards. These food contact studies show that exposure of Cast Nylon 6 to a variety of solvents, including water, pass the relevant FDA and EU standards by being well within the allowable extraction level for food contact of <2.5mg/dm², i.e., not measurable, the limit being 10mg/dm².

12. ECOLOGICAL INFORMATION

Nylacast has not conducted environmental toxicity or biodegradable studies on this material. This material (polymer) is not classified as biodegradable.

13. DISPOSAL CONSIDERATIONS

Recycle or dispose in accordance with local and national regulations.

14. TRANSPORT INFORMATION

This product is not defined under national/international road, rail, sea and air transport regulations as a hazardous material.

15. REGULATORY INFORMATION

This product is compliant with:

- EU Directive 2002/95/EC on the restrictions of use of certain hazardous substances in electrical and electronic equipment (RoHS), by not containing any of the designated substances,
- EU Directive 2002/96/EC on the restrictions of certain hazardous substances in waste electrical and electronic equipment (WEEE), by not containing any of the designated substances,
- EU Directive 2003/11/EC on the restrictions of the use of PBB and PBDE fire retardants because it does not contain fire retardants, being self-extinguishing to standard HB of IEC 60695-10-11 and UL 94.,
- this product is considered not to have met any hazards category under the section 311 and 312 of SARA Title III (Amendment Act-USA public law 99-499, Oct.17 1986) because it does not contain fire retardants being self-extinguishing to standard HB of IEC 60695-10-11 and UL 94,
- this is not a controlled product under the Canadian Workplace Hazardous Materials Information System because it does not contain any of the designated substances,
- this product does not contain any substances designated by the EU Reach Directive as being 'Substances (of) Very High Concern', or SHVC's,
- this product does not contain any substances defined as 'Conflict Materials'.

16. OTHER INFORMATION

Cast Nylon 6 has been shown to be physically and dimensionally stable for prolonged use/exposure in sea water.

This Safety Data Sheet was initially prepared by Professor Malcolm F Fox, R&D Group Manager, Nylacast Ltd., in June 2008 in accordance with the EC Regulation Number 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

This Safety Data Sheet has been periodically revised by Professor Malcolm F Fox, R&D Group Manager, Nylacast Ltd., in accordance with the EC Regulation Number 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Last revision was completed in August 2019.

Whilst the information above is believed to be accurate and represents the best information currently available to us, Nylacast Ltd. make no warranty, expressed or implied, with respect to such information, and assume no liability resulting from its use.