
1. Identification of the substance / preparation and of the company / undertaking.

Trade name	NUDEC®PS.
Name of the product	Polystyrene Sheets.
Product Use	General application in the construction sector (enclosures, glassing, covers...), thermoforming.
Responsible for placing on the market <i>Trade name of the firm</i>	See above.
Emergency number <i>Official advisory body</i>	Emergency call: (+34) 93.713.27.00. National Institute of Toxicology (Madrid, Spain): (+34) 91.562.04.20. The UK National Poisons Emergency number is: 0870 600 6266 (outside the UK: +44 870 600 6266)

2. Hazards Identification.

This product hasn't been classified as a dangerous substance or preparation according to the European Directives 67/548/CE and 1999/45/CE.

Symptoms related to use

Inhalation	Fine dust may cause irritation of respiratory system and mucous. If heated to high temperatures (> 200°C) during the heating process, the product may form vapors or fumes which may cause irritation of respiratory tract.
Skin contact	The prolonged contact with skin does not irritate. In normal process' conditions, the material can be heated at high temperature; in contact with hot material, may cause severe thermal burns.
Eye contact	Solid form or fine dust of the product may cause irritation to ocular mucous or ocular lesions.
Ingestion	Ingestion during handling is not likely. The ingestion of small quantities does not produce noxious effects. If swallowed, do not induce vomiting: seek medical advice immediately.

Adverse environmental effects

This product is not soluble in water. Because of its structure, the product should not be dangerous for aquatic life. Non biodegradable.

Adverse physicochemical effects

Combustible if exposed to flames. Flowing product can create electrical charge, resulting sparks may ignite fine dust or cause an explosion in some concentration ranges.

3. Composition/information on ingredients.

Chemical Name	Polystyrene.
Composition	≥ 98 %.
CAS number	9003-53-6.
EINECS O ELINCS number	The product is a polymer, following the European Regulation; registration on the EINECS (European Inventory of Existing Commercial Chemical Substances) inventory is not required.

Substances presenting a health hazard

The product is not composed by dangerous substances or dangerous preparations according to the European Directives 67/548/EEC and/or 1999/45/EEC.

4. First-aid measures.

Route of exposure

Inhalation

In case of inhalation of gases during the product combustion, move patient into fresh air. Seek medical attention.

Skin contact

In case of burns with molten material, immediately immerse in cold water. Wash immediately with soap and abundant water. In case of material adhering to skin, do not peel material from skin, obtain medical attention and treat the injury as a thermal burn. Seek medical attention.

Eye contact

In case of eye contact, wash immediately with abundant water. After the initial washing, remove the eventual contact lenses and go on washing affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

Ingestion

Ingestion during handling is not likely. Remove material from mouth. If swallowed, do not induce vomiting: seek medical advice immediately.

5. Fire-fighting measures.

Fire-class regulation

A: Solid materials fire, principally of organic nature, that burn with incandescence.

Technical measures

Stop the fire spreading. Call the fire brigade immediately. Evacuate non-essential personnel. Protective clothing, goggles and self-contained breathing equipment should be made available for firemen.

Extinguishing media

Suitable

Foam.

Water sprays (mist).

In case of minor fires:

- Chemical Powder ABC.
- Carbon dioxide (CO₂).

Not to be used

Water jets (stick jets).

Chemical powder BC.

Dangerous decomposition products

Complete combustion, with an excess of oxygen forms: carbon dioxide (CO₂) and water vapor. Partial combustion forms also: carbon monoxide (CO), soot and cracked products (styrene, aldehydes, ketones...)

Special protective equipment

In case of fire-fighting or risk of exposure to vapors or fumes, wear suitable breathing equipment.

6. Accidental release measures.

Personal precautions	Risk of slipping on smooth surfaces.
Environmental protection precautions	This product is not soluble in water. Because of its structure, the product should not be dangerous for aquatic life. Non biodegradable. Refer to a specialist for waste disposal in a safe manner in accordance with local or national regulations.
Cleaning methods	Clean and collect the released product by hand or using vacuum equipments.

7. Handling and storage.

Handling	The sheets may be heavy and difficult to handle. They must be carefully handled (do not drag) or using vacuum equipment. Avoid contact with hot or melted material. Avoid dust generation, otherwise, in some occasions; it may be run the risk of explosion. In order to decrease the potential risk of dust explosion, isolated and connect the electrical equipment to ground and avoid the dust accumulation. Use safety tools, which must not produce sparks, and anti-deflagrated electrical equipments.
Storage	The product should be stored in closed premises that guarantee normal environmental conditions. Store away heating and/or ignition sources.
Specific uses	No information available.

8. Exposure controls / personal protection

Occupational exposure limit	Particles (respirable dust particles) E (2008): VLA-ED: 3 mg/m ³ . Particles (inhalable dust particles) E (2008): VLA-ED: 10 mg/m ³ .
Occupational exposure controls	
Personal protection	In case of Risk of over exposure to dust, vapor or fumes (during product processing), wear suitable respirator with filter (recommended filter type: P1, EN-143)
Hands protection	The sharpened edges may cause cuts. Wear industrial gloves, EN-388.
Eyes protection	Wear goggles with lateral protections, EN-166.
Body protection	Overall (EN-340).
Hygienic measures	During the operation process is forbidden eating, drinking and smoking.
Environmental exposure controls	Non regulated.

9. Physical and chemical properties.

General information.

Aspect

Physical state	Solid.
Color	Transparent or colored.
Odour	Faint.

Important health, safety and environmental information

Ignition point (°C)	Near to 350.
Relative density	1,05
Solubility	Soluble in organic solvents.
Solubility in water	Insoluble.

Other information

Melting point (°C)	Near to 250.
Softening point (°C)	>70
Auto-ignition temperature (°C):	>400
Thermal decomposition (°C)	>300

10. Stability and reactivity.

The product is stable under normal operating conditions (storage, handling and use). The thermal decomposition starts, approximately, at 300°C.

Conditions to avoid

Avoid dust generation and/or accumulation.
 Avoid proximity or contact with flames or sparks.
 Avoid overheating the product.
 Do not heat to temperatures exceeding the thermal decomposition.
 Do not store to temperatures exceeding 70°C.

Materials to avoid

Avoid contact with strong oxidizing materials.

Hazardous decomposition products

Complete combustion with an excess of oxygen, forms: carbon dioxide (CO₂) and water vapor. Partial combustion forms also: carbon monoxide (CO), soot and cracked products (styrene, aldehydes, ketones...).

11. Toxicological information.

This product has not been classified as a dangerous substance or preparation according to the European Directives 67/548/CE and 1999/45/CE. Handling the product in the correct way, it does not have negative repercussions on health, according to the experiences and information which we have.

During the heating process may cause irritation of the skin, eyes and respiratory system.

12. Ecological information.

Ecotoxicity	Because of its low solubility, the product should not be dangerous for aquatic life.
Mobility	Because of its physic-chemical properties, the product has low soil mobility. The product has a density up to 1 g/cm ³ , it sinks in water. Because of its low solubility, the product should not be dangerous for aquatic life.
Persistence and degradability	This product is slowly biodegradable.
Bioaccumulative potential	Potential bioaccumulation of the product in environment is slow.

13. Disposal considerations.

Where possible, it is preferred recycling than destruction or incineration. The product is good for recycling. The condition to recycle is the collection and reutilization of exactly the same material. The elimination must be according to local or national regulations.

Industrial waste number EC: 070213: plastics.

14. Transport information.

Road (ADR) / Rail (RID)	Not restricted for transport.
UN number	Not applicable.
Marine (IMO)	Not restricted for transport.
Air Transport (ICAO/IATA)	Not restricted for transport.

15. Regulatory information.

Labelling and Classification CE	Not required.
Symbol(s) EC	Not classified according to EEC directives 67/548/EEC and 1999/45/EEC.
Wassergefährdungsklasse	NWG: non-hazardous to waters.

16. Other information.

All issues of this Material Safety Data Sheet have been modified and/or further details conform to the Regulation EU 1907/2006/EEC (REACH).

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.