Safety Data Sheet - Ducor Polypropylene Homopolymers

According to Regulation (EC) No 1907/2006 (REACH), Article 31

1. Identification of substance

Trade name	DuPure® (Polypropylene Homopolymers) Non Pelletized Resins Grades: DuPure® E01NP, G01NP, R01NP, T01NP, U01NP
Identified uses	Manufacture of plastic articles by injection molding, extrusion or other conversion process
Prohibited used	Applications involving permanent implantation into the body, European Class III & FDA Class III medical devices
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2. Hazards Identification

Classification & Labeling	This product is not classified as hazardous according to EEC directives 67/548/EEC, 1999/45/EC. This product is not classified as hazardous according to EC regulations 1907/2006/EC, 1272/2008/EC, and following amendments.
Information pertaining to particular dangers for man and environment	Fine dust may cause irritation of respiratory system and mucous. Contact with hot (molten) material – risk of serious burns. If heated to more than 160°C, the product may form vapors or fumes which may cause irritations of respiratory tract and cause coughing and sensation of shortness of breath. Handling this product may result in electrostatic accumulation. Use proper grounding procedures Dust may form explosive mixture in air. Combustible dust

3. Composition/Information on Ingredients

Chemical Name	1-Propene-homopolymer
Chemical Formula	(C3H6)n
CAS No. Designation	9003-07-0
Description	1-Propene-homopolymer, Non-pelletized

4. First Aid Measures

General information	Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid.
After inhalation	Exposure to spray, fumes and vapours produced by heated or burned product: Move to fresh air. Call for medical help.
After skin contact	After contact with the molten product, cool rapidly with cold water. Do not pull solidified product away from the skin. Seek immediate medical advice.
After eye contact	Immediately rinse with water for a prolonged period while holding the eyelids wide open. In case of irritation caused by fine dust: wash with copious volumes of water, until the irritation disappears. In case of eye contact with molten polymer: continuously flush eye(s) with cool running water for at least 15 minutes. Beyond flushing, do not attempt to remove the material adherent to the eye(s). Immediately seek medical attention
After swallowing	No specific measures have to be taken if the product is swallowed.

5. Fire fighting measures

Suitable extinguishing agents	For small fire: Carbon dioxide. Dry powder. Water spray. For large fire: Foam.
Unsuitable extinguishing agents	Solid water jet/stream
Specific hazards during fire fighting	Keep away from heat and sources of ignition. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). The formation of hydrocarbons and aldehydes are possible in the initial stages of a fire (especially in between 400 and 700°C)
Protection during firefighting	Wear approved positive pressure self-contained breathing apparatus and firefighter protective clothing.
Additional information	Combustible particulate solid, will decompose under fire conditions. Calorific Value: 8000 - 11000 kcal/kg Fight fire from safe distance with hose lines or monitor nozzles. Heat from fire may melt, decompose polymer, and generate flammable vapors. Move containers from fire area if it can be done without risk. Evacuate immediately in the event of opening of storage container pressure relief devices or discoloration of container. Always stay away from tanks engulfed in fire. Do not attempt to get on top of storage containers involved in fire. Cool storage containers with large volumes of water even after fire is out.

6. Accidental Release Measures

Person-related safety precautions	Creates dangerous slipping hazard on any hard smooth surface. Avoid generating dust. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Potential combustible dust hazard.
Measures for environmental protection	Do not flush into surface water or sanitary sewer system
Measures for cleaning/collecting	On land, sweep/shovel into suitable disposal containers or vacuum using equipment which avoids ignition risk. On water, material is insoluble; collect and contain as any solid. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

7. Handling and Storage

Information for safe handling	Dust explosion research did not establish this product to be explosible. However, also depending on specific handling and use of the product, we cannot exclude all explosion risks. We therefore advise to provide for appropriate exhaust ventilation and dust collection at machinery. Avoid dust accumulation in enclosed space. Consider using dust collection systems designed in accordance with ATEX 95. Avoid generating dust; fine dust suspended in air and in the presence of an ignition source is a potential dust explosion hazard. Polymer dust layer melts on the hot surface before ignition can occur. Hot surface temperature shall be limited to less than 270°C to avoid direct ignition of a dust cloud. Static discharge (spark), or other ignition sources, in high dust environments may ignite the dust and result in a dust explosion. Electrostatic charge may build during conveying or handling. Equipment handling polymer should be conductive and grounded (earthed) and bonded. Metal containers involved in the transfer of this material should be grounded and bonded. All electrical equipment should conform to applicable electric codes and regulatory requirements for areas handling combustible dusts. After handling, always wash hands thoroughly with soap and water. When bringing the material to processing temperatures vapors may develop may condense in the exhaust ventilation. See section 10.

	Refer to ATEX 95 and ATEX 137 and related Harmonized European Standards: EN 1127-1 (Explosive atmospheres – Explosion prevention and protection).
Requirements for storage areas and containers	Store in a dry location. Use good housekeeping practices during storage, transferring and handling. Process enclosures and adequate ventilation should be used to avoid excessive dust accumulation. Degradation can occur because of exposure to temperature, light and oxidizing agent: trace amounts of light hydrocarbons, compounds of oxidation, aldehydes and acids can be generated. Store away from excessive heat and away from strong oxidizing agents. Keep container closed to prevent contamination. Take measures to prevent the buildup of electrostatic charge. Avoid direct insufflation of air. Avoid direct sunlight and contact with sources of heat. Store either in the closed original containers in well-ventilated area or in silos with vents.

8. Exposure Controls and Personal Protection

Control parameters:
Components with workplace control parameters

Occupational Exposure Limits

Ingredients	Source	Type	Limit value
Materials that can be formed when handling this product: Non specified (inert or nuisance) dust	US - ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ inhalable 3 mg/m³ respirable

Consult local authorities for acceptable exposure limits

Exposure controls
Engineering measures

In accordance with ATEX 137, follow the recommendations in EN 1127-1 (Explosive atmospheres – Explosion Prevention and protection). Follow the recommendations in international standard NFPA 654 (as amended and adopted) for equipment used to handle this product. Engineering controls, i.e. enclosed systems, should be used whenever feasible to maintain exposures below acceptable criteria. When such controls are not feasible, or sufficient to achieve full conformance, other engineering controls such as local exhaust ventilation should be used. Equipment and vessels handling combustible dust from this material should be designed to either prevent dust explosions (inerting) or safely vent dust explosions per ATEX 95 and related Harmonized European Standards. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal protective equipment

General protective and hygienic measures	Dustproof clothing. Gloves. Safety glasses. Dust formation: dust mask. Do not eat, drink or smoke during use
Respiratory protection	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use appropriate respiratory protection where atmosphere exceeds recommended limits. Where workers could be exposed to dust concentrations above the exposure limit they must use appropriate certified respirators.
Hand protection	Protective gloves. When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten resin.
Eye protection	Safety glasses with side-shields.
Skin & Body protection	Wear suitable clothing. Safety foot-wear

9. Physical and Chemical Properties

Physical state	Solid
Appearance	Powders or flakes

Colour	Translucent to white
Odor	Slight
Melting point/range	140-170°C
Boiling point/range	Decomposition starting from 300°C
Autoignition temperature	> 300°C
Lower explosion limit	The minimum explosive concentration (MEC) for polymer dust varies according to particle size distribution
Density	0.89-0.91 g/cm3
Solubility in water	Insoluble
Bulk Density	350-600 kg/m3

10. Stability and Reactivity

Reactivity	Electrostatic charges may be generated during handling. Take precautionary measures against static discharge during blending and transfer operations.
Chemical Stability	The product is stable at normal handling- and storage conditions
Possibility of hazardous reactions	Dust may form explosive mixture in air.
Materials to avoid	Strong acids. Strong bases. Strong oxidizing agents. Halogens.
Hazardous decomposition products	Not expected to decompose under normal conditions.
Thermal decomposition	Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed.

11. Toxicological Information

Acute oral toxicity	Not classified
Skin corrosion/irritation	Not classified Heated product causes burns. Thermal decomposition products are produced at elevated temperatures and these may be irritating
Serious eye damage/ irritation	Not classified Fine dust may cause irritation to ocular mucous. Thermal decomposition products are produced at elevated temperatures and these may be irritating. Heated product causes burns.
Respiratory or skin sensitisation	Not classified
Cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified Dust may cause irritation of respiratory system. If heated to more than 160°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified

12. Ecological Information

Ecotoxicity Effects	Ecological damages are not known or expected under normal use. Small particles can have an effect on water and soil organisms.
Persistence and degradability	Product persists. Not expected to be biodegradable.
Bioaccumulation	This product is not expected to bioaccumulate
Mobility in soil	Low mobility. The product is not volatile, and insoluble in water
Results of PBT	Not determined

assessment	
Other adverse effects	No additional information available

13. Disposal Considerations

Waste treatment methods	All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible. Recycle if possible.
Additional information	Incinerate with household refuse in a municipal solid waste incinerator plan.

14. Transport Information

Transport Classification	The substance is not classified as dangerous according to relevant transport regulations.

15. Regulatory Information

EC regulations	See the Regulatory Affairs Product Information Datasheet (RAPIDS) of the product on www.ducorchem.com
German Water Hazard Class (WGK)	According to VwVwS (dd. 27-07-2005), Annex 1, Reg. No.766: not hazardous in water (nwg)

16. Other Information

Further information	Conforms to Regulation (EC) No 1907/2006 (REACH), Article 31.

Disclaimer:
The information contained in the Safety Data Sheet is at the date of its issuance to the best of our knowledge correct according to the data available to us. The information is meant as a guideline for safe use, handling, disposal, storage and transport of products and does not imply any warranty (not implied nor explicitly) or specification. The Supplier shall to the extent permitted by law not be liable for any error or incorrectness in the information contained in this Safety Data Sheet. The information relates exclusively to the specified products, which may not be suitable for combination with other materials or use in processes other than those specifically described here.

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