

SAFETY DATA SHEET



DUPONT™ 20 SPECIALTY POLYETHYLENE RESIN

Version 2.0

Revision Date 08.07.2023

Document no. 130000021028

This SDS adheres to the standards and regulatory requirements of Malaysia and may not meet the regulatory requirements in other countries.

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

Product name : DUPONT™ 20 SPECIALTY POLYETHYLENE RESIN

Recommended use of the chemical and restriction on use

Recommended use : Polymer

Restrictions on use : For manufacturing and research use only

Manufacturer, importer, supplier

Company : Du Pont Malaysia Sdn Bhd

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2. HAZARDS IDENTIFICATION

Product hazard classification

Not a hazardous substance or mixture.

Endpoints which are not classified, cannot be classified or are not applicable are not shown.

Other hazards

Resin particles, like other inert materials, are mechanically irritating to eyes. If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Components

Chemical Name	CAS-No.	Concentration
Polyethylene	9002-88-4	>99%

4. FIRST AID MEASURES

Inhalation : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin contact : The material is not likely to be hazardous by skin contact, but cleaning the skin after use is advisable. Cool skin rapidly with cold water after contact with molten material. Do not attempt to remove material from the skin. Obtain medical treatment for thermal burn. Wash contaminated clothing before reuse.

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Eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Ingestion	: Not a probable route of exposure. However, in case of accidental ingestion, call a physician.
Most important symptoms/effects, acute and delayed	: No information available.
Protection of first-aiders	: No information available.
Notes to physician	: No information available.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water, Foam, Dry chemical, Carbon dioxide (CO2)
Specific hazards	: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Material in pellet form may accumulate static charge when poured from one container to another.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus and protective suit.
Specific extinguishing methods	: No information available.
Further information	: The solid polymer can only be burned with difficulty. Evacuate personnel and keep upwind of fire. Grounding and elimination of the static charge is recommended.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Spilled material is a slipping hazard.
Environmental precautions	: Do not discharge to streams, ponds, lakes or sewers.
Methods and materials for containment and cleaning up	: Shovel or sweep up. Spills of fine material should be cleaned using gentle sweeping or vacuuming. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.

7. HANDLING AND STORAGE

Handling

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Technical measures/Precautions : Before using, read the Product Data Sheet.
When opening containers, avoid breathing vapours that may be emanating. Open container only in well-ventilated area.
Pneumatic conveying and other mechanical handling operations can generate combustible dust. Avoid significant deposits of material which may become airborne and form combustible dust clouds. Handling and processing operations should be conducted in accordance with best practices (e.g.NFPA-654).

Precautions for safe handling : No information available.

Storage

Suitable storage conditions : Store in a cool, dry place. Keep container closed to prevent contamination.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Chemical Name	Occupational Exposure Limits	Regulation
Dust (inhalable and respirable fraction)		
TWA	10 mg/m3 (Inhalable particulate.) The value is for particulate matter containing no asbestos and <1% crystalline silica.	MY OEL (03 2000)
TWA	3 mg/m3 (Respirable particles.) The value is for particulate matter containing no asbestos and <1% crystalline silica.	MY OEL (03 2000)
TWA	3 mg/m3 (Respirable particles.)	US ACGIH (03 2014)
TWA	10 mg/m3 (Inhalable particles.)	US ACGIH (03 2014)

Engineering measures : Use sufficient ventilation to keep employee exposure below recommended limits. When hot processing this material, use local and/or general exhaust ventilation to maintain the concentration of vapors and fumes below exposure limits. Local exhaust ventilation is preferred. Use static controls. Static charges can cause explosions in solvent and dust laden atmospheres. See Bulletin "Proper Use of Local Exhaust Ventilation During Processing of Plastics". Follow processing recommendations on the product data sheet.

Biological occupational exposure limits : No information available.

Personal protective equipment

Respiratory protection : A respiratory protection program that meets country requirements must be followed whenever workplace conditions warrant respirator use. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

Hand protection : Protective gloves

Eye protection : Wear safety glasses with side shields.
Wear tightly fitting chemical splash goggles and face shield when possibility exists for eye and face contact due to spattering or splashing of molten material.

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Skin protection : If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear.

Hygiene measures : No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (Physical state, form, colour, etc.)

Physical state : solid
Form : pellets
Colour : clear

Odour : mild hydrocarbon-like

Odour Threshold : No information available.

pH : Not applicable

Melting point/freezing point

No information available.

Initial boiling point and boiling range

Boiling point/boiling range : Not applicable

Flash point : 341 - 365 °C
no data available
Method: ASTM D 1929

Evaporation rate : Not applicable

Flammability (solid, gas) : May form combustible dust concentrations in air.

Upper/lower flammability or explosive limits

Upper explosion limit : Not applicable
Lower explosion limit : Not applicable

Vapour pressure : Not applicable

Vapour density : Not applicable

Density

No information available.

Solubility(ies)

Water solubility : negligible

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature

No information available.

Decomposition temperature : >320 °C

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Thermal decomposition of the resin accelerates above temperature listed.

Decomposition can occur below the recommended processing temperature limit.

Decomposition is a function of both processing temperature and time at that temperature.

Viscosity

Viscosity, kinematic : Not applicable

Viscosity, dynamic : Not applicable

Molecular weight : No information available.

10. STABILITY AND REACTIVITY

Reactivity : No information available.

Chemical stability : Stable at normal temperatures and storage conditions.

Possibility of hazardous reactions : Polymerization will not occur.

Large molten masses may give off hazardous gases. Water quenching is good practice.

Conditions to avoid : Temperature: > 320°C
Decomposes on heating.
At temperatures above the "conditions to avoid" temperature, thermal decomposition of the resin accelerates. Decomposition can occur below the recommended processing temperature limit. Decomposition is a function of both processing temperature and time at that temperature.

Materials to avoid : Strong bases, and, Oxidizing agents

Hazardous decomposition products : Hazardous decomposition products may include:, Carbon monoxide, Aldehydes, Alcohols, Organic acids, Formaldehyde, Acrolein, acetaldehydes

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Oral

Polyethylene : LD50/Rat: 7,950 mg/kg

Skin corrosion/irritation

Polyethylene : non-irritant

Serious eye damage/eye irritation

Polyethylene : non-irritant

Respiratory or skin sensitisation

Polyethylene : Not a skin sensitizer.

Germ cell mutagenicity

No information available.

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Carcinogenicity

No information available.

Reproductive toxicity

No information available.

Specific Target Organ Toxicity

No information available.

Aspiration hazard

No information available.

Other

DUPONT™ 20 SPECIALTY POLYETHYLENE RESIN : No data is available on the product itself.
The substance is a polymer and is not expected to produce toxic effects.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects

Acute and prolonged toxicity to fish

Polyethylene : The substance is a polymer and is not expected to produce toxic effects.

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in soil

No information available.

Other adverse effects

DUPONT™ 20 SPECIALTY POLYETHYLENE RESIN : No data is available on the product itself. Toxicity is expected to be low based on insolubility in water.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods : Preferred options for disposal are recycling, incineration with energy recovery, and landfill. The high fuel value of this product makes incineration very desirable for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

Contaminated packaging : Dispose of in accordance with local regulations.

SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: REGULATORY INFORMATION

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Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

16. OTHER INFORMATION

References

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The DuPont Oval Logo is a registered trademark of E.I. du Pont de Nemours and Company. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications and DuPont CAUTION Regarding Medical Applications.

Significant change from previous version is denoted with a double bar.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.