Basekim
Chemical Production Co.Ltd

MATERIAL SAFETY DATA SHEET

High Density Polyethylene (HDPE)

Product Name: High Density Polyethylene
Abbreviation: HDPE
CAS Number: 9002-88-4
Supplier: Basekim Company

1. Product Identification

HDPE is a thermoplastic polymer supplied as pellets, granules or powder.

Main uses:

- Plastic pipes
- Bottles and containers
- Packaging film
- Injection-moulded products
- Cable insulation
- Plastic sheets and coatings

2. Hazard Identification

HDPE is generally not classified as hazardous in its normal solid form.

Important hazards:

- Spilled pellets may cause slipping.
- Molten plastic can cause serious burns.
- Overheating may produce irritating smoke and fumes.
- Fine plastic dust may create a fire or explosion risk.
- Keep pellets out of drains, rivers and the environment.

3. Composition

Component	CAS Number	Content
High Density Polyethylene	9002-88-4	Normally above 99%
Additives, pigments or stabilisers	Grade-dependent	Normally below 1%

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4. First-Aid Measures

Inhalation: Move the person to fresh air. Seek medical attention if breathing irritation continues.

Eye contact: Rinse carefully with clean water for at least 15 minutes.

Skin contact: Wash with soap and water.

Molten plastic contact: Cool immediately with clean running water. Do not remove plastic stuck to the skin. Seek urgent medical attention.

Ingestion: Rinse the mouth. Seek medical advice if a large quantity is swallowed.

5. Firefighting Measures

Suitable extinguishing media:

- Water spray
- Foam
- Dry chemical powder
- Carbon dioxide

Burning HDPE may produce carbon monoxide, carbon dioxide, smoke and irritating fumes.

Firefighters should wear protective clothing and breathing equipment.

6. Accidental Release

- Sweep or vacuum spilled material.
- Clean floors immediately because pellets are slippery.
- Avoid creating dust.
- Keep the product away from drains and waterways.
- Remove ignition sources if powder or dust is present.

7. Handling and Storage

- Store in a cool, dry and ventilated place.
- Keep away from flames, sparks and strong oxidising chemicals.
- Avoid excessive processing temperatures.

- Use ventilation during heating, extrusion or moulding.
- Prevent static electricity and dust accumulation.
- Keep bags and containers closed.

8. Personal Protection

Eyes: Safety glasses.

Hands: Work gloves. Use heat-resistant gloves when handling hot or molten plastic.

Respiratory protection: Normally not required with good ventilation. Use suitable respiratory protection if dust or fumes are excessive.

Clothing: Wear suitable work clothing and closed safety footwear.

9. Physical Properties

Property	Information
Appearance	Solid pellets, granules or powder
Colour	Natural, white, black or grade-dependent
Odour	None or slight
Melting range	Approximately 125–135°C
Density	Approximately 0.94–0.97 g/cm³
Water solubility	Insoluble
Flammability	Combustible solid

10. Stability and Reactivity

Stable under normal storage and handling conditions.

Avoid:

- Excessive heat
- Open flames
- Sparks
- Strong oxidising agents
- Dust accumulation

Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide and irritating vapours.

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11. Environmental Information

HDPE is not readily biodegradable and may remain in the environment for a long time.

Do not release pellets, powder or waste into soil, drains, rivers or seas.

12. Disposal

Reuse or recycle whenever possible.

Dispose of waste through an authorised waste contractor according to local regulations.

Do not burn in an open fire.

13. Transport Information

HDPE in normal solid form is generally not classified as dangerous goods for road, sea or air transport.

Protect packaging from damage and prevent pellet loss during transport.

14. Important Notice

This is a general MSDS for HDPE. Exact properties, additives and safety requirements may vary by product grade.

Basekim and the original manufacturer should confirm the grade-specific composition, emergency telephone number and regulatory information before official publication.