High density polyethylene copolymer

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Mixtures

Trade name : High density polyethylene copolymer

Product code : HDB0355A

1.2. Recommended use and restrictions on use

Recommended use : Polymer preparations and compounds

1.3. Supplier

Braskem America, Inc.

1735 Market Street

Philadelphia, PA

19103-7583

TEL: (800) 396 - 5251

1.4. Emergency telephone number

Emergency number : 1 800-424-9300
Chemtrec (Outside USA) +1 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible Dust	Yes

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : May form combustible dust concentrations in air

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Special danger of slipping by leaking/spilling product. Electrostatic charges may be generated during handling. If small particles are generated during processing or handling, may form combustible dust concentrations in air.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
PE copolymer 1-hexene	(CAS-No.) 25213-02-9	<100%	Not classified

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : After contact with the molten product, cool rapidly with cold water. Do not attempt to remove the molten material from the skin. Burns caused by molten material must be treated clinically.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists. Consult an eye specialist.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Obtain emergency medical attention. Immediately call a poison center or doctor/physician. Do not induce vomiting without medical advice. May cause gastrointestinal blockage. Do not give laxatives.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Fumes are irritating to the respiratory system. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/effects after skin contact : Skin contact with hot material may result in severe burns. Dust from this product may cause skin irritation.

Symptoms/effects after eye contact : Dusts are mechanical irritants. Dust or fume may cause eye irritation. Effects may include discomfort or pain and redness.

Symptoms/effects after ingestion : Choking hazard.

4.3. Immediate medical attention and special treatment, if necessary

Treat as thermal burns. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. In molten state: reacts violently with water (moisture).

Explosion hazard : Dust could be formed as a result of granule degradation by impact or by abrasion during handling, grinding, or conveying operations. Potential dust explosion hazard from airborne release.

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : In molten state: reacts violently with water (moisture).

Firefighting instructions : Use water spray or fog for cooling exposed containers. Minimize generation of dust. Knock down/dilute dust cloud with water spray. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self-contained breathing apparatus.

Other information : Avoid raising powdered materials into airborne dust. Dust may form flammable and explosive mixture with air.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Minimize generation of dust. Provide adequate ventilation to minimize dust concentrations. Take precautionary measures against static discharge. Avoid contact with skin, eyes and clothing. Spills of this product present a serious slipping hazard. Do not breathe fumes, vapors. Avoid breathing dust.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e, clearing dust surfaces with compressed air). Take precautionary measures against static discharge. Use only non-sparking tools. Store away from other materials. Ensure all national/local regulations are observed. Consult an expert on waste disposal or treatment.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Warning: May Form Combustible (Explosive) Dust - Air Mixtures. Prevent dust accumulations to minimize explosion hazard. Obtain special instructions before use. Provide good ventilation in process area to prevent formation of vapor. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Keep container closed when not in use. Avoid raising powdered materials into airborne dust. Avoid contact with skin, eyes and clothing. Do not breathe dust, fume, vapors. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Proper grounding procedures to avoid static electricity should be followed. Dust could be formed as a result of granule degradation by impact or by abrasion during handling, grinding, or conveying operations. Potential dust explosion hazard from airborne release.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. If spilled, may cause the floor to be slippery.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation to minimize dust concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools.

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials : Fluorine, strong acids, strong oxidizing agents, chlorinated solvents, and aromatic compounds.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Polyethylene copolymer (**25213-02-9**)
Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation to minimize exposure to dust. Provide adequate ventilation to minimize dust concentrations. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. 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). Use only appropriately classified electrical equipment and powered industrial trucks.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. For certain operations, additional Personal Protection Equipment (PPE) may be required.

Hand protection:

Wear protective gloves to help prevent mechanical injury. For thermal protection from molten material, wear gloves with insulation. Check the resistance to chemicals and heat when choosing protective gloves

Eye protection:

Safety glasses with side shields should be worn when handling pellets. During hot processing, wear tightly fitting goggles and/or face shield when the possibility for eye contact exists

Skin and body protection:

Personal protective clothing should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling. When handling molten material, thermally-protective long sleeved clothing, boots and gloves should be worn

Respiratory protection:

Respirators may be required if respirable and total dust exposure limits are exceeded or irritation is experienced. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. Wear appropriate mask. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Translucent. Pellets/tablets. Granular solid.
Color	:	White to off-white
Odor	:	odorless
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	110 - 170 °C
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	0.940-0.970 g/cm³ (15°C)
Solubility	:	Soluble in : Xylene. Water: Insoluble
Log Pow	:	No data available
Auto-ignition temperature	:	>340 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

Maximum time of storage is 24 months after production.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Reacts violently with fluorine.

10.4. Conditions to avoid

High temperatures. Incompatible materials.

10.5. Incompatible materials

Fluorine, strong acids, strong oxidizers, chlorinated solvents and aromatic compunds.

10.6. Hazardous decomposition products

Decomposition products depend on temperature, exposure to air, and the presence of other substances. Processing may release irritating fumes, olefinic and paraffinic compounds, carbon monoxide, and carbon dioxide. Potential thermal decomposition products include trace aldehydes (including formaldehyde), alcohols, organic acids, and hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Ingestion; Skin and eye contact

Acute toxicity : Not classified

(Based on available data, the classification criteria are not met)

Polyethylene copolymer (**25213-02-9**)	
LD50 oral rat	Non-toxic product = > 4000 mg/kg

Skin corrosion/irritation : Not classified

(Based on available data, the classification criteria are not met)

Serious eye damage/irritation : Not classified

(Based on available data, the classification criteria are not met)

Respiratory or skin sensitization : Not classified

(Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified

(Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified

(Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified

(Based on available data, the classification criteria are not met)

Specific target organ toxicity – single exposure : Not classified

(Based on available data, the classification criteria are not met)

Specific target organ toxicity – repeated exposure : Not classified

(Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified

(Based on available data, the classification criteria are not met)

Symptoms/effects after inhalation : Fumes are irritating to the respiratory system. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/effects after skin contact : Skin contact with hot material may result in severe burns. Dust from this product may cause skin irritation.

Symptoms/effects after eye contact : Dusts are mechanical irritants. Dust or fume may cause eye irritation. Effects may include discomfort or pain and redness.

Symptoms/effects after ingestion : Choking hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

12.2. Persistence and degradability

High density polyethylene (HDPE)	
Persistence and degradability	This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

12.3. Bioaccumulative potential

High density polyethylene (HDPE)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Ensure all national/local regulations are observed. Consult an expert on waste disposal or treatment. Return in the shipping container properly labeled with any valve outlet plugs or caps secured and valve protection cap in place to supplier for proper disposal.

Additional information : Do not re-use empty containers. Do not dispose of waste into sewer. Do not remove as household garbage. Do not allow to enter drains or water courses.

Ecology - waste materials : Avoid release to the environment. Prevent contamination of soil, drains and surface waters.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

NOTE: Please contact supplier for regulatory information.

15.1. US Federal regulations

Polyethylene copolymer (**25213-02-9**)

TSCA
Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA - This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

SARA311/312 Hazard Classes –

Acute Health Hazard: No
Chronic Health Hazard: No
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

15.2. International regulations

CANADA

Polyethylene copolymer (**25213-02-9**)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification – Uncontrolled product according to WHMIS classification criteria

15.3. US State regulations

California Proposition 65

WARNING: This product can expose you to n-hexane which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Revision date : N/A

Other information : None.

Braskem - SDS_US_GHS_HazCom_2012 (modified 161213)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It warns that the handling of any chemical substance requires the previous knowledge of its hazards for the user. It is up to the user of the product company providing this SDS to and promote the training of its employees about possible risks come upon of the product. The information contained herein is not absolute, but only general information on the use of the chemical and indication of safety and security measures.

US OSHA LABEL per **29 CFR** § **1910.1200(f)**

High Density Polyethylene Copolymer

Warning

BEFORE USING, READ THE SAFETY DATA SHEET. Slipping hazard. May form combustible dust concentrations in air if small particles are generated during further processing, handling, machining, or by other means.

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EMERGENCY PHONE NUMBER
CHEMTREC: 800-424-9300

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