

### 1. Chemical product and company identification

Product name : Green High Density Polyethylene

Product code : SGE7252NS, SGE7252XP, SGF4950, SGF4950HS, SGF4950TT, SGM7746C, SGM9450F, SHA7260, SHC7260, SHD0356, SHD0860, SHD0952, SHD1760, SHD2560, SHE150, STGE7252NS, STGF4950, STGM9450F, STHA7260, STHC7260, STHD0860, STHD2560, STHE150, SHD2055NW.

CAS-No. : 25087-34-7

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : Polymer preparations and compounds

#### Company information

Braskem S.A.  
Rua Eteno, 1561, Polo Petroquímico de Camaçari  
Camaçari, BA, CEP: 42810-000, Brasil  
+55 (71) 3413-3600  
email: productsafety@braskem.com

#### Emergency telephone number

Emergency number : +1 703-741-5970 (International - 24h)  
+(81)-345209637 (Japan - 24h)

### 2. Hazards identification

No labelling applicable

#### Other hazards which do not result in classification

other hazards which do not result in classification : Spills of this product present a serious slipping hazard.  
Electrostatic charges may be generated during handling.  
Dust could be formed as a result of granule degradation by impact or by abrasion during handling, grinding, or conveying operations.  
Dust from this product may cause respiratory irritation.

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Electrostatic charges may be generated during handling.  
Dust could be formed as a result of granule degradation by impact or by abrasion during handling, grinding, or conveying operations.  
Dust from this product may cause respiratory irritation.

Additional hazards when processed : Handling this product may result in electrostatic accumulation.  
Use proper grounding procedures.

### 3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Chemical name : 1-Butene, polymer with ethene

Name	Concentration (%)	Formula	Reference number in the gazette list		CAS-No.
			CSSL No.	ISHL No.	

1-Butene, polymer with ethene	100	(C <sub>4</sub> H <sub>8</sub> .C <sub>2</sub> H <sub>4</sub> ) <sub>x</sub>	(6)-18	-	25087-34-7
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## 4. First aid measures

### 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 : Remove victim to 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/doctor.  
  
Do not induce vomiting without medical advice.  
May cause gastrointestinal blockage. Do not give laxatives.

### Most Important Symptoms/Effects

- 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 : Dust from this product may cause skin irritation.  
  
The melted product adheres to the skin and causes burns.
- 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 : May be harmful if swallowed.  
  
Choking hazard.

### Notes to physician

- Note to physician : Treat symptomatically.

## 5. Fire fighting measures

- 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
- Fire hazard : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.
- 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.

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Firefighting instructions	: Use water spray or fog for cooling exposed containers. Avoid creating or spreading dust. Knock down/dilute dust cloud with water spray. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Avoid direct water stream on molten material. Molten form explodes upon contact with water.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Avoid raising powdered materials into airborne dust. Dust may form flammable and explosive mixture with air.

## 6. Accidental release measures

### Personal Precautions, Protective Equipment and Emergency Procedures

General measures	: Avoid creating or spreading 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 fume, vapours, dust.
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#### For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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#### For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

#### Environmental precautions

Environmental precautions	: Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
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#### Methods and Equipment 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). Minimise generation of dust. Take precautionary measures against static discharge. Use only non-sparking tools. Store away from other materials. Ensure all national/local regulations are observed. Comply with applicable regulations for solid waste disposal.
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## 7. Handling and storage

### Handling

Precautions for safe handling	: Warning: may form combustible (explosive) dust - air mixtures. Prevent dust accumulations to minimise explosion hazard. Obtain special instructions before use. Provide good ventilation in process area to prevent formation of vapour.
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	<p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>Take precautionary measures against static discharge.</p> <p>Keep container closed when not in use.</p> <p>Avoid raising powdered materials into airborne dust.</p> <p>Avoid contact with skin, eyes and clothing.</p> <p>Do not breathe dust, fume.</p> <p>Minimise 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.</p> <p>Proper grounding procedures to avoid static electricity should be followed.</p>
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
	Handle in accordance with good industrial hygiene and safety practice.
Additional hazards when processed	: Handling this product may result in electrostatic accumulation. Use proper grounding procedures.
<b>Storage</b>	
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.
Material used in packaging/containers	: No data available
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.
Incompatible materials	: Strong acids. Strong oxidizing agents.

## 8. Exposure controls / Personal protection equipment

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
Protective equipment	

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Respiratory protection	: Respirators may be required if respirable and total dust exposure limits are exceeded or irritation is experienced, Wear appropriate mask, The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product, 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
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
Other information	: Do not eat, drink or smoke during use

## 9. Physical and chemical properties

Physical state	: Solid
Appearance	: Granular solid
Colour	: White to off-white
Odour	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: 350 ° C
Decomposition temperature	: No data available
Flammability	: Non flammable.
Vapour pressure	: No data available
Relative density	: 0.908 - 0.939 g/cm <sup>3</sup>
Density	: No data available
Relative gas density	: No data available
Solubility	: Soluble in: Xylene. Water: Insoluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Explosive limits (vol %)	: No data available
Viscosity, kinematic	: No data available
Particle size	: No data available
Particle size distribution	: No data available
Particle shape	: No data available
Particle aspect ratio	: No data available

Particle specific surface area : No data available

## 10. Stability and reactivity

Reactivity : No dangerous reactions known under normal conditions of use.  
 Chemical stability : Stable under normal conditions of use.  
 Possibility of hazardous reactions : Hazardous polymerization will not occur.  
 Conditions to avoid : Overheating.  
 Incompatible materials : Strong acids. Strong oxidizers.  
 Hazardous decomposition products : No hazardous decomposition products known at room temperature.

## 11. Toxicological information

Potential Adverse human health effects and symptoms : Not expected to present a significant hazard under anticipated conditions of normal use, Contact with hot material – prevent serious burns  
 Other information : Likely routes of exposure: ingestion, inhalation, skin and eye  
 Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)  
 Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)  
 Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

### HDPE – Copolymer 1-Butene (25087-34-7)

LD50 oral rat	4 g/kg
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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 sensitization : Not classified (Based on available data, the classification criteria are not met)  
 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)  
 STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)  
 STOT-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)

## 12. Ecological information

### Ecotoxicity

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

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

Other information : Avoid release to the environment.

### Persistence and degradability

HDPE - Copolymer 1-Butene (25087-34-7)	
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.

### Bioaccumulative potential

HDPE - Copolymer 1-Butene (25087-34-7)	
Bioaccumulative potential	Not established.

### Mobility in soil

HDPE - Copolymer 1-Butene (25087-34-7)	
Mobility in soil	No data available

### Hazardous to the ozone layer

Ozone : No data available

Effect on the ozone layer : No additional information available.

Other adverse effects : No additional information available

## 13. Disposal considerations

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.

Ecology - waste materials : Avoid release to the environment.

Prevent contamination of soil, drains and surface waters.

Additional information : Do not re-use empty containers.

Do not dispose of waste into sewer.

Do not remove as household garbage.

## 14. Transport information

### International Regulations

**Overland transport (UN RTDG)**

UN-No. (UN RTDG) : Not regulated  
Proper Shipping Name (UN RTDG) : Not regulated  
Packing group (UN RTDG) : Not regulated  
Transport hazard class(es) (UN : Not regulated

RTDG)

**Transport by sea (IMDG)**

UN-No. (IMDG) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Packing group (IMDG) : Not regulated  
Transport hazard class(es) : Not regulated

(IMDG)

**Air transport (IATA)**

UN-No. (IATA) : Not regulated  
Proper Shipping Name (IATA) : Not regulated  
Packing group (IATA) : Not regulated  
Transport hazard class(es) : Not regulated

(IATA)

Marine pollutant : No

**Regulations in Japan**

Other information : No supplementary information available

## 15. Regulatory information

**National law**

Chemical Substances Control Law - Existing/Newly Announced Chemical Substances

Industrial Safety and Health Law - Existing Chemical Substances

**Other regulatory Information**

Regulatory reference : Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active, Listed on the Canadian DSL (Domestic Substances List), Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory), Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances), Listed on the Japanese ENCS (Existing New Chemical Substances) inventory, Listed on KECL/KECI (Korean Existing Chemicals Inventory), Listed on IECS (Inventory of Existing Chemical Substances Produced or Imported in China), Listed on NZIoC (New Zealand Inventory of Chemicals), Listed on the Japanese ISHL (Industrial Safety and Health Law), Listed on the TCSI (Taiwan Chemical Substance Inventory), Listed on the NCI (Vietnam - National Chemical Inventory)

## 16. Other information

Other information : None.

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.