

### SECTION 1: Identification

#### 1.1. GHS Product identifier

Product form	: Substance
Trade name	: Polyisobutene (PIB)
Chemical name	: 1-Propene, 2-methyl-, homopolymer
EC-No.	: 618-360-8
CAS-No.	: 9003-27-4
UN-No. (ADR)	: 3257
Product code	: PIB06, PIB06 IBC, PIB06 TF, PIB06 TR, PIB08, PIB08 TF, PIB08 TR, PIB10, PIB10 IBC, PIB10 TF, PIB10 TR, PIB10B, PIB10B IBC, PIB10B TF, PIB12, PIB12 TF, PIB12 TR, PIB16, PIB16 IBC, PIB16 TF, PIB16 TR, PIB18, PIB18 TF, PIB18 TR, PIB20, PIB20 TF, PIB20 TR, PIB24, PIB24 A, PIB24 A TR, PIB24 TF, PIB24 TR, PIB28, PIB28 TF, PIB28 TR, PIB28LZ, PIB30, PIB30 TF, PIB30 TR, PIB32, PIB32DM, PIB32 TF, PIB32 TR, PIB32 3M, PIB80, PIB80 TF, PIB80 TR, PIB90, PIB120, PIB120 TF, PIB120 TR, PIB121, PIB121 TR, PIB122, PIB122 TF, PIB122 TR, PIB122LZ, PIB126, PIB126 TF, PIB126 TR, PIB128, PIB128 TF, PIB128 TR, PIB128KL, PIB128KL TR, PIB240, PIB240 TF, PIB240 TR, PIB240KL, PIB240KL TR, PIB N/E
Formula	: (C <sub>4</sub> H <sub>8</sub> ) <sub>x</sub>

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	: Use as an intermediate Formulation & (re)packing of substances and mixtures coatings Adhesives Agrochemicals Fuels Lubricants and additives Laboratory chemicals Functional fluids Consumer use Metal working fluids Cosmetics, personal care products
Recommended use	: Industrial use resulting in manufacture of another substance (use of intermediates)

#### 1.4. Supplier's details

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

productsafety@braskem.com

#### 1.5. Emergency phone number

Emergency number : 1-703-741-5970 (INTERNATIONAL)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification according to the United Nations GHS

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### Labelling according to the United Nations GHS

No labelling applicable

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

Other hazards not contributing to the classification : Spilled material may present a slipping hazard, Spilled material may present a slipping hazard

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Chemical name : 1-Propene, 2-methyl-, homopolymer

Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Polyisobutylene (Main component)	CAS-No.: 9003-27-4	100	Not classified

Comments : The substance has a variable viscosity and some grades meet the criteria for classification as an aspiration hazard, while some grades do not meet the criteria for classification. The information in Section 3 of this SDS indicates that the CAS number is associated with the Aspiration Toxicity hazard classification. In the absence of a measured viscosity, the substance will be classified as being an aspiration hazard. Where viscosity measurements are available, the overall classification presented in Section 2 of this SDS will reflect the hazard classification based on the measured viscosity.

#### 3.2. Mixtures

Not applicable

### SECTION 4: First-aid measures

#### 4.1. Description of necessary 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. If breathing stops, give artificial respiration. Get medical advice/attention. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : In case of contact with cold material: Wash skin with plenty of water and soap. In case of contact with hot material: Rinse immediately with plenty of water for 15 minutes. Seek immediate medical advice. Obtain medical attention. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : In case of contact with cold material: Rinse immediately with plenty of water. In case of contact with hot material: Rinse immediately with plenty of water for 15 minutes. Get medical advice/attention. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Seek medical attention immediately. Rinse mouth. Obtain emergency medical attention.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : Overexposure to vapours may result in cough.

Symptoms/effects after skin contact : Heated product causes burns.

Symptoms/effects after eye contact : Heated product causes burns.

Symptoms/effects after ingestion : Ingestion may cause nausea and vomiting.

#### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

In case of skin burns, to minimize physical damage to the skin, do not remove the polybutene. Cover the injured area with appropriate burn gel.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam. Water spray. Foam. Dry powder. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread. Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : On combustion forms: Carbon dioxide. Carbon monoxide.

Explosion hazard : No direct explosion hazard.

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### 5.3. Special protective actions for fire-fighters

- Firefighting instructions : Cool closed containers exposed to fire with water spray. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protective equipment for firefighters : Fully enclosed impervious protective suit with integral or tight-fitting gloves, boots, self-contained or supplied air respirator must be worn. For further information refer to section 8: "Exposure controls/personal protection". Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Do not allow run-off from fire fighting to enter drains or water courses.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Stop leak if safe to do so. Stay upwind/keep distance from source. Clean up even minor leaks or spills if possible without unnecessary risk. Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.
- Emergency procedures : Stop leaks if it can be done without personal risk. Stay upwind/keep distance from source. Clean up any spills as soon as possible, using an absorbent material to collect it. Collect all waste in suitable and labelled containers and dispose according to local legislation. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Ventilate area.

### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Do not discharge into drains or the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and materials for containment and cleaning up

- For containment : Stop leaks if it can be done without personal risk. Ventilate spillage area. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Take up liquid spill into dry absorbent material e.g.: dry sand/earth/vermiculite. Collect all waste in suitable and labelled containers and dispose according to local legislation. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Work in a well-ventilated area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- 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.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Provide adequate ventilation.
- Storage conditions : Store tightly closed in a dry, cool and well-ventilated place. Bulk storage does not require any special measure. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Strong acids. Strong oxidizing agents. Sources of ignition. Direct sunlight.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

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### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure adequate ventilation. Either local exhaust or general room ventilation is usually required. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Other information : Do not eat, drink or smoke during use.

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

#### Personal protective equipment:

Avoid all unnecessary exposure.

- Hand protection : Insulating protective gloves. Impermeable protective gloves. Wear protective gloves
- Eye protection : Wear chemical goggles if material is handled hot. No special eye protection equipment recommended under normal conditions of use. Chemical goggles or safety glasses
- Skin and body protection : When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection must be worn
- Respiratory protection : If excessive exposure exists, use only approved air-purifying or supplied air respirator operated in a positive pressure mode. Wear appropriate mask

### 8.4. Exposure limit values for the other components

No additional information available

## SECTION 9: Physical and chemical properties

### 9.1. Basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear. Viscous
- Colour : Colourless.
- Odour : characteristic.
- Odour threshold : Not available
- Melting point : Not available
- Freezing point : Not available
- Boiling point : Not available
- Flammability : Non flammable.
- Lower explosion limit : Not available
- Upper explosion limit : Not available
- Flash point : PIB06, PIB06 IBC, PIB06 TF, PIB06 TR : 125°C  
PIB08, PIB08 TF, PIB08 TR : 130°C  
PIB10, PIB10 IBC, PIB10 TF, PIB10 TR : 130°C  
PIB10B, PIB10B IBC, PIB10B TF: 130°C  
PIB12, PIB12 TF, PIB12 TR : 135°C  
PIB16, PIB16 IBC, PIB16 TF, PIB16 TR : 135°C  
PIB18, PIB18 TF, PIB18 TR: 150°C  
PIB20, PIB20 TF, PIB20 TR: 165°C  
PIB24, PIB24 TF, PIB24 TR: 190°C  
PIB24 A, PIB24 A TR: 190°C  
PIB28, PIB28 TF, PIB28 TR: 190°C  
PIB30, PIB30 TF, PIB30 TR: 190°C  
PIB32, PIB32 TF, PIB32 TR: 190°C  
PIB32 3M: 200°C  
PIB32DM: >=220°C  
PIB80, PIB80 TF, PIB80 TR: 220°C  
PIB90 : > 190°C  
PIB120, PIB120 TF, PIB120 TR: 220°C  
PIB121, PIB121 TR: 240°C  
PIB122, PIB122 TF, PIB122 TR: 235°C  
PIB126, PIB126 TF, PIB126 TR: 240°C  
PIB128, PIB128 TF, PIB128 TR: 240°C  
PIB128KL, PIB128KL TR: 240°C  
PIB240, PIB240 TF, PIB240 TR, PIB240KL TR: 245°C
- Auto-ignition temperature : Not available
- Decomposition temperature : > 260 °C
- pH : Not applicable
- pH solution : Not available

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Viscosity, kinematic (calculated value) (40 °C)	: PIB06, PIB06 IBC, PIB06 TF, PIB06 TR : 26 - 34 mm <sup>2</sup> /s (37.8°C) PIB08, PIB08 TF, PIB08 TR : 102 -110 mm <sup>2</sup> /s (37.8°C) PIB10, PIB10 IBC, PIB10 TF, PIB10 TR : 20 - 30 mm <sup>2</sup> /s (100°C) PIB10B, PIB10B IBC, PIB10B TF: 20 - 30 mm <sup>2</sup> /s (100°C) PIB12, PIB12 TF, PIB12 TR : 34 - 42 mm <sup>2</sup> /s (100°C) PIB16, PIB16 IBC, PIB16 TF, PIB16 TR : 46 - 52 mm <sup>2</sup> /s (100°C) PIB18, PIB18 TF, PIB18 TR: 65 - 80 mm <sup>2</sup> /s (100°C) PIB20, PIB20 TF, PIB20 TR: 100 - 120 mm <sup>2</sup> /s (100°C) PIB24, PIB24 TF, PIB24 TR: 200 - 240 mm <sup>2</sup> /s (100°C) PIB24 A, PIB24 A TR: 200 - 240 mm <sup>2</sup> /s (100°C) PIB28, PIB28 TF, PIB28 TR: 260 - 320 mm <sup>2</sup> /s (100°C) PIB30, PIB30 TF, PIB30 TR: 600 - 650 mm <sup>2</sup> /s (100°C) PIB32 3M : 610 - 720 mm <sup>2</sup> /s (100°C) PIB32, PIB32DM, PIB32 TF, PIB32 TR: 640 - 720 mm <sup>2</sup> /s (100°C) PIB80, PIB80 TF, PIB80 TR: 1450 – 1700 mm <sup>2</sup> /s (100°C) PIB90 : 1900 - 2100 °C mm <sup>2</sup> /s (100°C) PIB120, PIB120 TF, PIB120 TR: 2300 - 2700 mm <sup>2</sup> /s (100°C) PIB121, PIB121 TR: 2900 - 3200 mm <sup>2</sup> /s (100°C) PIB122, PIB122 TF, PIB122 TR: 3000 - 3400 mm <sup>2</sup> /s (100°C) PIB126, PIB126 TF, PIB126 TR: 3900 – 4200 mm <sup>2</sup> /s (100°C) PIB128, PIB128 TF, PIB128 TR: 4000 – 4700 mm <sup>2</sup> /s (100°C) PIB128KL, PIB128KL TR: 4000 – 4700 mm <sup>2</sup> /s (100°C) PIB240, PIB240 TF, PIB240 TR, PIB240KL TR: 11000 – 14000 mm <sup>2</sup> /s (100°C)
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0,84 (PIB06) - 0,92 (PIB240) (water =1)
Relative vapour density at 20°C	: Not available
Solubility	: Soluble in hydrocarbons. Water: ≤ 0.1 % Negligible in water
Particle size	: Not applicable

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## 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 in use and storage conditions as recommended in item 7. Not established.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known. Hazardous polymerization will not occur. Not established.

### 10.4. Conditions to avoid

Extremely high temperatures. Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong oxidizing agents. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: Not applicable

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Respiratory or skin sensitisation	: 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)
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

### SECTION 12: Ecological information

#### 12.1. Toxicity

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)

#### 12.2. Persistence and degradability

Polyisobutene (PIB) (9003-27-4)	
Persistence and degradability	Not established.

#### 12.3. Bioaccumulative potential

Polyisobutene (PIB) (9003-27-4)	
Bioaccumulative potential	Not established.

#### 12.4. Mobility in soil

Polyisobutene (PIB) (9003-27-4)	
Mobility in soil	No additional information available

#### 12.5. Other adverse effects

Ozone	: Not classified (Based on available data, the classification criteria are not met)
Other adverse effects	: No additional information available
Other information	: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Regional legislation (waste)	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Consult an expert on waste disposal or treatment. Dispose of in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information




In accordance with UN RTDG / IMDG / IATA /

UN RTDG	IMDG	IATA
<b>14.1. UN number</b>		
3257	3257	3257
<b>14.2. UN Proper Shipping Name</b>		
ELEVATED TEMPERATURE LIQUID, N.O.S. (Polyisobutylene)	ELEVATED TEMPERATURE LIQUID, N.O.S. (Polyisobutylene)	Elevated temperature liquid, n.o.s. (Polyisobutylene)
<b>14.3. Transport hazard class(es)</b>		
9	9	9

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UN RTDG	IMDG	IATA
		
<b>14.4. Packing group</b>		
III	III	Not applicable
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes, when transported at elevated temperature (=> 100°C).	Dangerous for the environment : Yes
Transport at temperature below 100°C: Not regulated for all modes of transport		

### 14.6. Special precautions for user

Special transport precautions : The information about transport regulations as supplied herein does not cover all technical and operational requirements and, therefore, can not be considered exhaustive. Please check out the guidelines from the regulations of the National Road and Rail organization, International Maritime Organisation (IMO) and the International Air Transport Association (IATA) before transporting the product. The transporting company is responsible for compliance with the laws, regulations and other rules as may apply to the transport of the material.

### UN RTDG

Special provisions (UN RTDG) : 232, 274  
Limited quantities (UN RTDG) : 0  
Excepted quantities (UN RTDG) : E0  
Packing instruction (UN RTDG) : P099, IBC01  
Portable tank and bulk container special instructions (UN RTDG) : T3  
Portable tank and bulk container special provisions (UN RTDG) : TP3, TP29

### IMDG

Special provisions (IMDG) : 232, 274  
Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P099  
IBC packing instructions (IMDG) : IBC01  
Tank instructions (IMDG) : T3  
Tank special provisions (IMDG) : TP3, TP29  
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE  
EmS-No. (Spillage) : S-P - SPILLAGE SCHEDULE Papa - SUBSTANCES DANGEROUS WHEN WET (COLLECTABLE ARTICLES)  
Stowage category (IMDG) : A  
Stowage and handling (IMDG) : SW5  
Flash point (IMDG) : above 100°C  
Properties and observations (IMDG) : Any liquid which is transported at or above 100°C but below its flashpoint. May cause fire if in contact with combustible material due to extreme temperature.

### IATA

PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA packing instructions (IATA) : Forbidden  
PCA max net quantity (IATA) : Forbidden  
CAO packing instructions (IATA) : Forbidden  
CAO max net quantity (IATA) : Forbidden  
ERG code (IATA) : 9L

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### 14.7. Transport in bulk according to IMO instruments

Product Name: POLY(+4)ISOBUTYLENE

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

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 IECSC (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 INSQ (Mexican National Inventory of Chemical Substances). Listed on the TCSI (Taiwan Chemical Substance Inventory). Listed on the NCI (Vietnam - National Chemical Inventory).
State or local regulations	: U.S. - Texas - Effects Screening Levels - Long Term. U.S. - Texas - Effects Screening Levels - Short Term.

## SECTION 16: Other information

Issue date	: 12 June 2019
Revision date	: 25 Mayo 2023
Supersedes	: 21 February 2022

Data sources	: Loli.
Other information	: None.

Braskem\_SDS\_UN\_22.2.3 (modified 230227)

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.