

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Polyisobutene (PIB)
Chemical name	: 1-Propene, 2-methyl-, homopolymer
CAS-No.	: 9003-27-4
Product code	: PIB 02, PIB 02 TF, PIB 02 TR, PIB 04, PIB 04 IBC, PIB 04 TF, PIB 04 TR
Formula	: (C4H8) _x
Synonyms	: 1-Propene, 2-methyl-, homopolymer / Polyisobutene / Poly(4+) isobutylene / POLYISOBUTENE

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Use as an intermediate Formulation & (re)packing of substances and mixtures coatings 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)

1.3. Supplier

US office:
Braskem S.A.
5100 Westheimer Rd - Suite 495
Houston, 77056 - USA
Tel: 713 255 4747 | Fax: 713 255 4740

Manufacturer:
Braskem S.A.
Av. Presidente Costa e Silva, 1178 – Capuava
Santo André, SP, CEP: 09270-001, Brasil
Tel. (55 11) 4478-1777

E-mail	: productsafety@braskem.com
Telephone	: +55 (11) 3576-9999
Website	: www.braskem.com.br

1.4. Emergency telephone number

Emergency number	: +1 800-424-9300 (USA – 24h) +1 703-741-5970 (International – 24h)
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SECTION 2: Hazard(s) identification


2.1. Classification of the substance or mixture

GHS US classification

Aspiration hazard Category 1 May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)	: 
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Signal word (GHS US)	: Danger
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Hazard statements (GHS US)	: May be fatal if swallowed and enters airways
Precautionary statements (GHS US)	: If swallowed: Immediately call a doctor, a POISON CENTER. Do NOT induce vomiting. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

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

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%	GHS US classification
Polyisobutylene (Main constituent)	(CAS-No.) 9003-27-4	100	Asp. Tox. 1, H304

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 first aid measures

First-aid measures after inhalation	: Remove victim to fresh air. If breathing stops, give artificial respiration. Get medical advice/attention.
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.
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.
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.

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

Symptoms/effects after inhalation	: Overexposure to vapors 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. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

4.3. Immediate medical attention and special treatment, 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 (and unsuitable) extinguishing media

Suitable extinguishing media	: carbon dioxide (CO2), dry chemical powder, foam. Water spray.
Unsuitable extinguishing media	: Do not use a water jet since it may cause the fire to spread.

5.2. Specific hazards arising from the chemical

Fire hazard	: On combustion forms: Carbon dioxide. Carbon monoxide.
Explosion hazard	: No direct explosion hazard.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Cool closed containers exposed to fire with water spray.
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- Protection during firefighting : 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".
- 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.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal 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 labeled containers and dispose according to local legislation. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Do not discharge into drains or the environment.

6.3. Methods and material 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 labeled containers and dispose according to local legislation.

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 : Work in a well-ventilated area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes.
- 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.
- Incompatible materials : Strong acids. Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Polyisobutylene (9003-27-4)

No additional information available

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.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Insulating protective gloves. Impermeable protective gloves

Eye protection:

Wear chemical goggles if material is handled hot. No special eye protection equipment recommended under normal conditions of use

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear. Viscous liquid.
Color	: Colorless
Odor	: Characteristic
Odor threshold	: No data available
pH	: Not applicable
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: PIB 02, PIB 02 TF, PIB 02 TR: 100 °C PIB 04, PIB 04 IBC, PIB 04 TF, PIB 04 TRTR: 125 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: Not available
Relative vapor density at 20 °C	: No data available
Relative density	: ≈ 0.841 g/cm ³ (water =1)
Solubility	: Water: ≤ 0.1 % Poorly soluble in water
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not available
Decomposition temperature	: No data available
Viscosity, kinematic	: PIB 02, PIB 02 TF, PIB 02 TR: 5 - 10 mm ² /s (37.8 °C) PIB 04, PIB 04 IBC, PIB 04 TF, PIB 04 TR: 14 - 19 mm ² /s (37.8 °C)
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

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 under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No dangerous reactions known. Hazardous polymerization will not occur.

10.4. Conditions to avoid

Extremely high temperatures.

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

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

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
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)
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	: May be fatal if swallowed and enters airways.
Viscosity, kinematic	: PIB 02, PIB 02 TF, PIB 02 TR: 5 - 10 mm ² /s (37.8 °C) PIB 04, PIB 04 TF, PIB 04 TR: 14 - 19 mm ² /s (37.8 °C)
Symptoms/effects after inhalation	: Overexposure to vapors 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. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

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.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

Transportation of Dangerous Goods

Not regulated for transport

Transport by sea: IMO – IMDG

Not regulated for transport

Air transport: IATA – ICAO

Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Polyisobutylene (9003-27-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

15.2. International regulations

CANADA

Polyisobutylene (9003-27-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

Polyisobutylene (9003-27-4)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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

Revision date : 29 November 2023

Braskem - SDS_US_GHS_HazCom_2012 (modified 190806)

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.