

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. 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
Product code	: PIB 02, PIB 02 TF, PIB 02 TR, PIB 04, PIB 04 IBC, PIB 04 TF, PIB 04 TR
Formula	: (C ₄ H ₈) _x
Synonyms	: POLYISOBUTENE / Poly(4+) isobutylene / Polyisobutene / 1-Propene, 2-methyl-, homopolymer

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

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
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier (Only Representative):
Braskem Netherland BV
Weena 238-240, 9th Floor, Tower C
NL - 3012 NJ – Rotterdam

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

Email: productsafety@braskem.com

Telephone : +55 (11) 3576-9999

Website : www.braskem.com.br

1.4. Emergency telephone number

Emergency number : +1 703-741-5970 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aspiration hazard, Category 1 H304
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May be fatal if swallowed and enters airways.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



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GHS08

Signal word (CLP) : Danger
Hazard statements (CLP) : H304 - May be fatal if swallowed and enters airways.
Precautionary statements (CLP) : P301+P310 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER.
P331 - Do NOT induce vomiting.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, national regulation.

2.3. Other hazards

other hazards which do not result in classification : Spilled material may present a slipping hazard.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
Polyisobutylene	CAS-No.: 9003-27-4 EC-No.: 618-360-8	100

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, both acute and delayed

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. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

4.3. Indication of any immediate medical attention and special treatment needed

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: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

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

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5.3. Advice for firefighters

- Firefighting instructions : Cool closed containers exposed to fire with water spray.
- 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".
- 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 labelled 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 labelled 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.

7.3. Specific end use(s)

See Section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

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8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. 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.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

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

8.2.2.2. Skin protection

Skin and body protection:

When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection must be worn

Hand protection:

Insulating protective gloves. Impermeable protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

If excessive exposure exists, use only approved air-purifying or supplied air respirator operated in a positive pressure mode

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Clear. Viscous liquid.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: PIB 02, PIB 02 TF, PIB 02 TR: 100 °C PIB 04, PIB 04 IBC, PIB 04 TF, PIB 04 TR: 125 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not applicable
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)
Solubility	: Water: ≤ 0.1 % Poorly soluble in water
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	: ≈ 0.841 g/cm ³ (water =1)
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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.

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 hazard classes as defined in Regulation (EC) No 1272/2008

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 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	: May be fatal if swallowed and enters airways.

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Viscosity, kinematic

PIB 02, PIB 02 TF, PIB 02 TR: 5 - 10 mm²/s (37.8 °C)
PIB 04, PIB 04 IBC, PIB 04 TF, PIB 04 TR: 14 - 19 mm²/s (37.8 °C)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : No additional information available

11.2.2. Other information

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

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

Polyisobutene (PIB) (9003-27-4)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment 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

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

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REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

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)

Germany

Water hazard class (WGK) : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Danish National Regulations : Young people under 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
1.1	Product identifier	Modified	
2.3	Other hazards	Modified	
8.1	Control parameters	Added	
9	Physical and chemical properties	Modified	

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Indication of changes			
Section	Changed item	Change	Comments
11	Toxicological information	Modified	
11.2.	Information on other hazards	Added	
14	Transport information	Removed	

Full text of H- and EUH-statements:	
Asp. Tox. 1	Aspiration hazard, Category 1
H304	May be fatal if swallowed and enters airways.

Braskem - SDS_EU (modified 221026)

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.