

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

### 1.1. Product identifier

Product form	:	Substance
Trade name	:	Isoprene
Chemical name	:	Isoprene
CAS No	:	78-79-5
Formula	:	C <sub>5</sub> H <sub>8</sub>
Synonyms	:	Methyl-1,3-butadiene / 2-Methylbutadiene / beta-Methylbivynil / 2-Methyleno / Isopentadiene; Isoprene, Isoprene stabilizer,

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

Use of the substance/mixture	:	Used to produce SIS, adhesives, sealers and poly-isoprene
------------------------------	---	---

### 1.3. Details of the supplier of the safety data sheet

Braskem America, Inc.  
1735 Market Street  
Philadelphia, PA 19103-7583  
Tel: (800) 396 – 5251

Contact Email	:	productsafety@braskem.com
Emergency Telephone Number (CHEMTREC)	:	CHEMTREC: +1-703-527-3887 (INTERNATIONAL) 1-800-424-9300 (NORTH AMERICA)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Flam. Liq. 1 H224  
Muta. 2 H341  
Carc. 1B H350

Full text of H-statements: see section 16

### 2.2. Label elements

#### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H224 - Extremely flammable liquid and vapor  
H341 - Suspected of causing genetic defects  
H350 - May cause cancer

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P280 - Wear eye protection, protective clothing, protective gloves  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P308+P313 - If exposed or concerned: Get medical advice/attention  
P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), dry extinguishing powder, foam to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up

P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

## 2.3. Other hazards

other hazards which do not result in classification : Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc. Vapors can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

## 2.4. Unknown acute toxicity (GHS-US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Substance type : Multi-constituent  
 Name : Isoprene  
 CAS No : 78-79-5

Name	Product identifier	%
2-methyl-1,3-butadiene	(CAS No) 78-79-5	≥99.5
Alpha and Beta olefins <sup>(1)</sup>	Not applicable	≤ 0.5
Dimers	Not applicable	≤ 0.1

Full text of H-statements: see section 16

### 3.2. Mixture

Not applicable

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately get medical attention.

First-aid measures after skin contact : Rinse immediately with plenty of water for 15 minutes. Do not rub the skin and eyes after direct contact with the product. Remove contaminated clothing and shoes. Discard contaminated clothing. Immediately get medical attention.

First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub the skin and eyes after direct contact with the product. Seek immediate medical advice.

First-aid measures after ingestion : Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek medical attention immediately.

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

Symptoms/injuries after inhalation : Inhalation may cause irritation, cough, shortness of breath.

Symptoms/injuries after skin contact : May cause moderate irritation. Effects of skin contact may include : redness.

Symptoms/injuries after eye contact : May cause moderate irritation.

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

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

Use personal protective equipment as required. Refer to section 8.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam. Water fog.

Unsuitable extinguishing media : Do not use water jet. Use of heavy stream of water may spread fire.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable liquid and vapor. This material can accumulate static charge by flow or agitation and can be ignited by static discharge. The vapors are heavier than air and can accumulate in high concentrations on the ground, in cavities, channels and cellars. Vapors can travel considerable distances to a source of ignition where they can ignite, flash back, or explode. Combustion generates : hydrocarbons.

Explosion hazard : Prolonged exposure to fire may cause containers to rupture/explode.

Reactivity : Reacts violently in contact with oxidation agents. Reacts violently with (some) halogens.

## 5.3. Advice for firefighters

- Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Stop leak if safe to do so. Fight fire with normal precautions from a reasonable distance. Do not approach fire except upwind and only with proper skin and respiratory protection (supplied air only). Cool adjacent tanks / containers / drums with water jet.
- Protective equipment for firefighters : Wear recommended personal protective equipment. In case of fire: Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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

- General measures : Eliminate all ignition sources if safe to do so. When using do not smoke. Use personal protective equipment as required. Stop leak if safe to do so.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. Refer to section 8.
- Emergency procedures : Avoid all eye and skin contact and do not breathe vapor and mist. Evacuate unnecessary personnel. Eliminate all ignition sources if safe to do so. No smoking.

#### 6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. In case of fire: Wear self-contained breathing apparatus. Refer to section 8.
- Emergency procedures : Avoid all eye and skin contact and do not breathe vapor and mist. Evacuate and limit access. Eliminate every possible source of ignition. Stop leak if safe to do so.

### 6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Absorb remaining liquid with sand or inert absorbent and remove to safe place. Collect in closed containers for disposal. Do not empty into drains.

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

- For containment : Prevent spread over a wide area (e.g. by containment or oil barriers). Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Take up large spills with pump or vacuum. Place spent adsorbent in sealed packages and contact specialist waste disposal contractor.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid producing mist or vapors by heating of opened recipient. Ground/bond container and receiving equipment. Do not pressurize, cut, weld, braze solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Keep container closed when not in use.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

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

- Technical measures : Use explosion-proof ventilating equipment. Use explosion-proof electrical equipment. Use grounded electrical/mechanical equipment. Use only non-sparking tools.
- Storage conditions : Store in a well-ventilated place. Keep cool. Store in tightly closed, properly ventilated containers away from heat, sparks, open flame. Protect containers against damage. Keep stored the least quantity possible.
- Incompatible materials : Strong oxidizing agents. Halogens.
- Storage temperature : ≤ 35 °C
- Packaging materials : PVC (Polyvinyl chloride). stainless steel. Carbon steel. This material may attack some forms of plastics, rubbers and coatings.

### 7.3. Specific end use(s)


No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Cyclopentadiene (542-92-7)		
ACGIH	ACGIH TWA (ppm)	75 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	75 ppm
Acetonitrile (75-05-8)		
ACGIH	ACGIH TWA (ppm)	20 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	70 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	40 ppm

## 8.2. Exposure controls

Appropriate engineering controls	: Use explosion-proof ventilating equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Personal protective equipment	: An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits. Gloves. Protective goggles. Protective clothing.
	
Materials for protective clothing	: PVC (Polyvinyl chloride). PE (polyethylene).
Hand protection	: Protective gloves made of PVC. Materials to avoid. Butyl caoutchouc (butyl rubber). NR (Natural rubber (caoutchouc), Natural latex).
Eye protection	: if necessary: tightly fitting safety goggles.
Skin and body protection	: Use chemically protective clothing.
Respiratory protection	: An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.
Environmental exposure controls	: Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: colorless
Odor	: aromatic
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -145,9 °C
Freezing point	: No data available
Boiling point	: 34,067 °C @ 760 mmHg
Flash point	: -54 °C closed cup
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 63.397 kPa (21.1°C)
Critical pressure	: 3789,6 kPa
Relative vapor density at 20 °C	: 2.3
Relative density	: No data available
Density	: 0,681 @ 20°C
Solubility	: Soluble in benzene. Water: Insoluble Ethanol: Soluble Acetone: Soluble
Log Pow	: 2.58 @ 20 °C pH 7
Log Kow	: No data available

Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	2 - 9 vol. %

## 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts violently in contact with oxidation agents. Reacts violently with (some) halogens.

### 10.2. Chemical stability

This product is stable with an appropriate level of inhibitor, but reactive (unstable) without. May form explosive peroxides.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur under normal temperatures and pressures. Hazardous polymerization may occur if exposure to fire conditions.

### 10.4. Conditions to avoid

Direct sunlight. Pure oxygen. sparks. heat. Open flame. Rust.

### 10.5. Incompatible materials

Strong oxidizing agents. Halogens. Strong acids. alcohols.

### 10.6. Hazardous decomposition products

Toxic fumes. irritating gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified  
(Based on available data, the classification criteria are not met)

Isoprene ( \f )78-79-5	
LD50 dermal rat	> 2000 mg/kg
Isoprene (78-79-5)	
LD50 oral rat	2043 mg/kg
LD50 dermal rat	> 1 ml/kg
LC50 inhalation rat (mg/l)	180 mg/l/4h
ATE US (vapors)	180,000 mg/l/4h
ATE US (dust, mist)	180,000 mg/l/4h
Alpha and Beta olefins	
ATE US (oral)	700,000 mg/kg bodyweight
Acetylenic	
ATE US (oral)	500,000 mg/kg bodyweight
ATE US (dust, mist)	1,500 mg/l/4h
Cyclopentadiene (542-92-7)	
LD50 oral rat	113 mg/kg
LD50 dermal rabbit	430 mg/kg
LC50 inhalation rat (mg/l)	39 mg/l (Exposure time: 1 h)
ATE US (oral)	113,000 mg/kg bodyweight
ATE US (dermal)	430,000 mg/kg bodyweight
ATE US (vapors)	39,000 mg/l/4h
ATE US (dust, mist)	39,000 mg/l/4h
Acetonitrile (75-05-8)	
LD50 dermal rabbit	392 - 980 mg/kg
LC50 inhalation rat (mg/l)	26,8 mg/l/4h
ATE US (oral)	500,000 mg/kg bodyweight

<b>Acetonitrile (75-05-8)</b>	
ATE US (dermal)	392,000 mg/kg bodyweight
ATE US (gases)	4500,000 ppmv/4h
ATE US (vapors)	11,000 mg/l/4h
ATE US (dust, mist)	1,500 mg/l/4h

<b>Alcohols</b>	
ATE US (oral)	100,000 mg/kg bodyweight
ATE US (dermal)	300,000 mg/kg bodyweight
ATE US (dust, mist)	0,500 mg/l/4h

<b>Water (7732-18-5)</b>	
LD50 oral rat	> 90 ml/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 : Suspected of causing genetic defects.
- Carcinogenicity : May cause cancer.

<b>Isoprene (78-79-5)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen

- 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)
- Potential Adverse human health effects and symptoms : Central nervous system depression. Asphyxiant in high concentrations. May cause irritation to the respiratory tract and to other mucous membranes. May cause skin irritation. May cause minor eye irritation. This material or its emissions may induce blood disorders and/or aggravate pre-existing blood disorders.
- Symptoms/injuries after inhalation : Inhalation may cause irritation, cough, shortness of breath.
- Symptoms/injuries after skin contact : May cause moderate irritation. Effects of skin contact may include : redness.
- Symptoms/injuries after eye contact : May cause moderate irritation.
- Symptoms/injuries after ingestion : Ingestion may cause nausea and vomiting.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Isoprene (78-79-5)</b>	
LC50 fish 1	32,5 - 50,15 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	140 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	58,75 - 95,32 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

<b>Acetonitrile (75-05-8)</b>	
LC50 fish 1	1600 - 1690 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	1000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

<b>Isoprene (78-79-5)</b>	
Log Pow	2,3

Isoprene (78-79-5)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	3,2 - 4,5 (at 20 °C)
Acetonitrile (75-05-8)	
Log Pow	-0,34

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Disposal through controlled incineration or authorized waste dump.

### SECTION 14: Transport information

#### Classification for LAND transport: DOT

UN Number : UN1218  
 Proper Shipping Name : Isoprene, stabilized  
 Class : 3  
 Packing group : I  
 Reportable quantity : Isoprene

#### Classification for SEA transport: IMO - IMDG

UN Number : UN1218  
 Proper Shipping Name : ISOPRENE, STABILIZED  
 Class : 3 - Flammable liquid  
 Packing group : I  
 Marine pollutant : Not considered marine pollutant based on available data  
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
 Product name : Isoprene

#### Classification for AIR transport: IATA - ICAO

UN Number : UN1218  
 Proper Shipping Name : Isoprene, stabilized  
 Class : 3 - Flammable Liquids  
 Packing group : I

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product therefore it cannot be considered exhaustive. See guidelines of ADR, RID, IMDG and IATA regulations before transporting the product. The transportation organization is responsible for compliance with laws, regulations and rules for the transport of the material.

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Component	CAS No	Limit
Dimers		<= 0,1
Carbonylated		<= 0,001
Alpha and Betal olefins		<= 0,5
Acetylenic		<= 0,001
Peroxides		<= 0,0001
Piperlylenes		<= 0,0005
Inhibitor (TBC)		0,01 - 0,015
Alkenes		<= 0,001
Alcohols		<= 0,001

Sulfur	CAS No 7704-34-9	<= 0,0005
halogens	CAS No	

### Isoprene (78-79-5)

Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting 0,1 %

### Cyclopentadiene (542-92-7)

EPA TSCA Regulatory Flag S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.

### Acetonitrile (75-05-8)

Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

RQ (Reportable quantity, section 304 of EPA's List of Lists) 5000 lb

SARA Section 313 - Emission Reporting 1,0 %

## 15.2. International regulations

### CANADA

#### Isoprene (78-79-5)

Listed on the Canadian DSL (Domestic Substances List)

#### 1,4-Pentadiene (591-93-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Cyclopentadiene (542-92-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class F - Dangerously Reactive Material

#### Acetonitrile (75-05-8)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class B Division 2 - Flammable Liquid  
Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects  
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

### EU-Regulations

#### Isoprene (78-79-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### 1,4-Pentadiene (591-93-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Cyclopentadiene (542-92-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Acetonitrile (75-05-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Water (7732-18-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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

Flam. Liq. 1 H224

Muta. 2 H341

Carc. 1B H350

Aquatic Chronic 2 H411

Full text of H-statements: see section 16

### 15.2.2. National regulations

### Isoprene (78-79-5)

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)  
 Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
 Listed on the Canadian IDL (Ingredient Disclosure List)

### 1,4-Pentadiene (591-93-5)

Listed on the AICS (Australian Inventory of Chemical Substances)  
 Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
 Listed on the Korean ECL (Existing Chemicals List)

### Cyclopentadiene (542-92-7)

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 the Canadian IDL (Ingredient Disclosure List)

### Acetonitrile (75-05-8)

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 Korean ECL (Existing Chemicals List)  
 Listed on NZIoC (New Zealand Inventory of Chemicals)  
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
 Japanese Poisonous and Deleterious Substances Control Law  
 Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
 Listed on the Canadian IDL (Ingredient Disclosure List)

### Water (7732-18-5)

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 Korean ECL (Existing Chemicals List)  
 Listed on NZIoC (New Zealand Inventory of Chemicals)  
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

## 15.3. US State regulations

### Isoprene (78-79-5)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
Yes	No	No	No	

## SECTION 16: Other information

**Note:** For maritime transport, the ship must have the necessary equipment and resources to maintain the product at the same temperature as received during loading at Braskem.

Full text of H-statements:

-----	Acute Tox. 2 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 2
-----	Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
-----	Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
-----	Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
-----	Acute Tox. 4 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 4
-----	Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
-----	Asp. Tox. 1	Aspiration hazard, Category 1
-----	Carc. 1B	Carcinogenicity, Category 1B
-----	Comb. Dust	Combustible Dust
-----	Eye Dam. 1	Serious eye damage/eye irritation, Category 1
-----	Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
-----	Flam. Liq. 1	Flammable liquids Category 1
-----	Flam. Liq. 2	Flammable liquids Category 2
-----	Muta. 2	Germ cell mutagenicity, Category 2
-----	Skin Irrit. 2	Skin corrosion/irritation Category 2
-----	STOT SE 3	Specific target organ toxicity (single exposure) Category 3
-----	STOT SE 3	Specific target organ toxicity (single exposure) Category 3
-----	H224	Extremely flammable liquid and vapor
-----	H225	Highly flammable liquid and vapor
-----	H232	May form combustible dust concentrations in air
-----	H301	Toxic if swallowed
-----	H302	Harmful if swallowed
-----	H304	May be fatal if swallowed and enters airways
-----	H311	Toxic in contact with skin
-----	H315	Causes skin irritation
-----	H318	Causes serious eye damage
-----	H319	Causes serious eye irritation
-----	H330	Fatal if inhaled
-----	H332	Harmful if inhaled
-----	H335	May cause respiratory irritation
-----	H336	May cause drowsiness or dizziness
-----	H341	Suspected of causing genetic defects
-----	H350	May cause cancer

Braskem - SDS US

*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.*