

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Cumene
Chemical name	: cumene
CAS-No.	: 98-82-8
Product code	: P506
Formula	: C9H12
Synonyms	: Cumene / Benzene, (1-methylethyl)- / (1-Methylethyl)benzene / 2-Phenylpropane
Other means of identification	: cumene

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Phenol and acetone manufacture

1.3. Supplier

Braskem America, Inc.
 1735 Market Street
 Philadelphia, PA 19103-7583
 Tel: (800) 396 – 5252
 productsafety@braskem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC International: +1 703 527 3887
 CHEMTREC: +1 800 424 9300 (NORTH AMERICA)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3	Flammable liquid and vapor
Germ cell mutagenicity Category 1B	May cause genetic defects
Carcinogenicity Category 1A	May cause cancer
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	May cause respiratory irritation
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) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

Flammable liquid and vapor
 May be fatal if swallowed and enters airways
 May cause respiratory irritation
 May cause genetic defects
 May cause cancer

Precautionary statements (GHS US) :

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing mist, spray, vapors.

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Use only outdoors or in a well-ventilated area.
Wear protective clothing, protective gloves, eye protection.
If swallowed: Immediately call a POISON CENTER.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
Call a POISON CENTER if you feel unwell.
Do NOT induce vomiting.
In case of fire: Use carbon dioxide (CO₂), dry extinguishing powder, sand to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, national regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Spilled material may present a slipping hazard. Toxic to aquatic life with long lasting effects.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name : Cumene
CAS-No. : 98-82-8

Name	Product identifier	%	GHS US classification
Cumene	CAS-No.: 98-82-8	≥ 93	Flam. Liq. 3, H226 Muta. 1B, H340 Carc. 1A, H350 STOT SE 3, H335 Asp. Tox. 1, H304
benzene	CAS-No.: 71-43-2	< 1	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304
α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide	CAS-No.: 80-15-9	≤ 0.01	Flam. Liq. 4, H227 Org. Perox. E, H242 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

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Name	Product identifier	%	GHS US classification
Toluene	CAS-No.: 108-88-3	≤ 0.001	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
phenol, carboic acid, monohydroxybenzene, phenylalcohol	CAS-No.: 108-95-2	≤ 0.0001	Muta. 2, H341 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 STOT RE 2, H373 Skin Corr. 1B, H314

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of 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 person to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Immediately remove contaminated clothing or footwear. Rinse skin with water/shower. Seek medical attention if ill effect or irritation develops. IF exposed or concerned: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Seek medical attention if ill effect or irritation develops.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. If vomiting occurs have person lean forward. Immediately call a poison center or doctor/physician.

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

Symptoms/effects	: May cause cancer. May cause genetic defects.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause slight temporary irritation. Symptoms may be delayed.
Symptoms/effects after eye contact	: Direct contact with the eyes is likely to be irritating. May cause slight temporary irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed. May be fatal if swallowed and enters airways.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Dry powder. Carbon dioxide. Sand.
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	: Flammable liquid and vapor. On combustion, forms: carbon oxides (CO and CO ₂).
Explosion hazard	: May form flammable/explosive vapor-air mixture. Heat may cause pressure rise with explosion of tanks/drums. Heavier than air, vapors may travel long distances along ground, ignite and flash back to source.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use special care to avoid static electric charges. No open flames. No smoking. Eliminate all ignition sources if safe to do so.

6.1.1. For non-emergency personnel

Protective equipment : Wear personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Avoid any direct contact with the product. Evacuate unnecessary personnel. Avoid breathing mist, spray, vapors.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Avoid all eye and skin contact and do not breathe vapor and mist. Spilled material may present a slipping hazard.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain leaking substance, pump over in suitable containers. Use non-sparking tools.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Take precautionary measures against static discharge. Consult the appropriate authorities about waste disposal.

Other information : Dispose in a safe manner in accordance with local/national regulations.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of contaminated materials refer to section 13: "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Take precautionary measures to prevent the formation of static electricity.

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist, spray, vapors. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands thoroughly after handling. 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.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container tightly closed.

Incompatible materials : Strong bases. Strong acids. Strong oxidizing agents. Keep away from ignition sources (including static discharges).

Storage area : Store in a dry, cool and well-ventilated place. Store away from heat.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cumene (98-82-8)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Cumene
ACGIH OEL TWA	5 ppm
Remark (ACGIH)	TLV® Basis: URT adenoma; neurological eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Cumene
OSHA PEL TWA	245 mg/m ³
OSHA PEL TWA	50 ppm
Limit value category (OSHA)	prevent or reduce skin absorption
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH	900 ppm (10% LEL)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	245 mg/m ³
NIOSH REL TWA	50 ppm
US-NIOSH chemical category	Potential for dermal absorption
benzene (71-43-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Benzene
ACGIH OEL TWA	0.02 ppm
Remark (ACGIH)	TLV® Basis: Myelodysplastic syndrome; acute myeloid leukemia; leukemia; hematologic eff; chromosomal dam. Notations: Skin; A1 (Confirmed Human Carcinogen); BEI
ACGIH chemical category	Confirmed Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Benzene
BEI	25 µg/g Kreatinin Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: end of shift (background) 500 µg/g Kreatinin Parameter: t,t-Muconic acid - Medium: urine - Sampling time: end of shift (background)
Regulatory reference	ACGIH 2024

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benzene (71-43-2)	
USA - OSHA - Occupational Exposure Limits	
Local name	Benzene
OSHA PEL TWA	10 ppm
OSHA PEL STEL	5 ppm (see 29 CFR 1910.1028)
OSHA PEL C	25 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	50 ppm 10 mins.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
USA - IDLH - Occupational Exposure Limits	
IDLH	500 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	0.1 ppm
NIOSH REL STEL	1 ppm
Toluene (108-88-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Toluene
ACGIH OEL TWA	188 mg/m ³
ACGIH OEL TWA	20 ppm
Remark (ACGIH)	TLV® Basis: CNS, visual & hearing impair; female repro system eff; pregnancy loss. Notations: OTO; A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Toluene
BEI	0.3 mg/g Kreatinin Parameter: o-Cresol (with hydrolysis) - Medium: urine - Sampling time: End of shift - Notations: B 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: End of shift 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: Prior to last shift of workweek
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene
OSHA PEL TWA	200 ppm
OSHA PEL STEL	300 ppm
OSHA PEL C	500 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm 10 mins.
Remark (OSHA)	(2) See Table Z-2.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2

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Toluene (108-88-3)	
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	375 mg/m ³
NIOSH REL TWA	100 ppm
NIOSH REL STEL	560 mg/m ³
NIOSH REL STEL	150 ppm
phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Phenol
ACGIH OEL TWA	19 mg/m ³
ACGIH OEL TWA	5 ppm
Remark (ACGIH)	TLV® Basis: URT irr; lung dam; CNS impair. Notations: Skin; A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Phenol
BEI	250 mg/g Kreatinin Parameter: Phenol - Medium: urine - Sampling time: End of shift - Notations: B, Ns
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Phenol
OSHA PEL TWA	19 mg/m ³
OSHA PEL TWA	5 ppm
Limit value category (OSHA)	prevent or reduce skin absorption
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH	250 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	19 mg/m ³
NIOSH REL TWA	5 ppm
NIOSH REL C	60 mg/m ³
NIOSH REL C	15.6 ppm
US-NIOSH chemical category	SK: SYS(FATAL)-DIR(COR) Apr 2011
α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide (80-15-9)	
USA - AIHA - Occupational Exposure Limits	
WEEL TWA	1 ppm
AIHA chemical category	skin notation

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8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid the formation of mists in the atmosphere. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. 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:
Chemically resistant protective gloves. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. ISO 374-1
Eye protection:
Chemical goggles or safety glasses. ISO 16321-1
Skin and body protection:
Long sleeved 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

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Color	: Yellowish
Odor	: aromatic odor
Odor threshold	: No data available
pH	: Not applicable
Melting point	: -96 °C
Freezing point	: -96 °C
Boiling point	: 152 °C
Flash point	: 43.9 °C (111.02 °F; (Closed cup))
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor.
Vapor pressure	: 0.427 kPa (20 °C / 68 °F)
Relative vapor density at 20°C	: 4.1
Relative density	: 0.858 – 0.94 g/cm ³ (20 °C / 68 °F)
Density	: 0.858 – 0.94 (20 °C / 68°F)
Solubility	: Soluble in : Ethanol. Benzene. Acetone. Diethyl ether. Carbon tetrachloride. Petroleum ether. Water: 61.3 mg/l
Partition coefficient n-octanol/water (Log Pow)	: 3.55 (at 23 °C) 3.66
Auto-ignition temperature	: 420 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: 0.85 mm ² /s (25 °C / 77 °F)
Viscosity, dynamic	: No data available
Explosion limits	: 0.9 – 6.5 vol % Upper explosion limit: 0.9 – 6.5 %
Explosive properties	: No data available
Oxidizing properties	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.2. Chemical stability

Handling this product may result in electrostatic accumulation. Use proper grounding procedures.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In the event of thermal decomposition : May release flammable gases. Carbon oxides (CO, CO₂).

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)

Cumene (98-82-8)	
LD50 oral rat	2260 mg/kg body weight
LD50 dermal rat	10600 mg/kg
LD50 dermal rabbit	> 3160 mg/kg body weight Animal: rabbit
LC50 Inhalation - Rat	39 mg/l/4h
LC50 Inhalation - Rat [ppm]	> 3577 ppm (Exposure time: 6 h Source: JAPAN_GHS)
ATE US (oral)	2260 mg/kg body weight
ATE US (dermal)	10600 mg/kg body weight
ATE US (vapors)	39 mg/l/4h
ATE US (dust, mist)	39 mg/l/4h
benzene (71-43-2)	
LD50 dermal rabbit	> 8200 mg/kg
LC50 Inhalation - Rat	44.66 mg/l/4h
ATE US (oral)	810 mg/kg body weight
ATE US (vapors)	44.66 mg/l/4h

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benzene (71-43-2)	
ATE US (dust, mist)	44.66 mg/l/4h
Toluene (108-88-3)	
LD50 oral rat	2600 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	12000 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat	12.5 mg/l/4h
phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
LD50 oral	340 mg/kg body weight
LD50 dermal rat	> 525 mg/kg
LD50 dermal	660 mg/kg body weight
LC50 Inhalation - Rat (Dust/Mist)	> 900 mg/l
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h
α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide (80-15-9)	
LD50 oral rat	382 mg/kg (Source: NLM_CIP)
LD50 dermal	530 mg/kg
LC50 Inhalation - Rat [ppm]	220 ppm/4h
ATE US (oral)	382 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	220 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h
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	: May cause genetic defects.
Carcinogenicity	: May cause cancer.
Cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen, Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes
benzene (71-43-2)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens, Evidence of Carcinogenicity

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benzene (71-43-2)	
In OSHA Hazard Communication Carcinogen list	Yes
In OSHA Specifically Regulated Carcinogen list	Yes
Toluene (108-88-3)	
IARC group	3 - Not classifiable
phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause respiratory irritation.
Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
benzene (71-43-2)	
STOT-repeated exposure	Causes damage to organs (hematopoietic system) through prolonged or repeated exposure.
Toluene (108-88-3)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
LOAEL (dermal, rat/rabbit, 90 days)	260 mg/kg body weight Animal: rabbit
NOAEL (dermal, rat/rabbit, 90 days)	130 mg/kg body weight Animal: rabbit
STOT-repeated exposure	May cause damage to organs (Skin, kidneys, liver, nervous system) through prolonged or repeated exposure.
α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide (80-15-9)	
STOT-repeated exposure	May cause damage to organs (lungs) through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Viscosity, kinematic	: 0.85 mm ² /s (25 °C / 77 °F)
Symptoms/effects	: May cause cancer. May cause genetic defects.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause slight temporary irritation. Symptoms may be delayed.
Symptoms/effects after eye contact	: Direct contact with the eyes is likely to be irritating. May cause slight temporary irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed. May be fatal if swallowed and enters airways.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Cumene (98-82-8)	
LC50 - Fish [1]	6.04 – 6.61 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
EC50 - Crustacea [1]	0.6 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	4.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: IUCLID)

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Cumene (98-82-8)	
EC50 - Crustacea [2]	7.9 – 14.1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
ErC50 algae	2.01 mg/l Source: ECHA
NOEC (chronic)	0.35 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.38 mg/l Test organisms (species): other: Duration: '28 d'
NOEC chronic crustacea	0.35 mg/l
NOEC chronic algae	0.22 mg/l
benzene (71-43-2)	
LC50 - Fish [1]	10.7 – 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	8.76 – 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 - Crustacea [2]	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	29 mg/l (Species: Pseudokirchneriella subcapitata)
phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
LC50 - Fish [1]	8.9 mg/l
EC50 - Crustacea [1]	3.1 mg/l Test organisms (species): Ceriodaphnia dubia
EC50 - Other aquatic organisms [1]	3.1 mg/l waterflea
EC50 72h - Algae [1]	180 mg/l Test organisms (species): Dunaliella tertiolecta
EC50 72h - Algae [2]	217.6 mg/l Test organisms (species): Dunaliella tertiolecta
ErC50 algae	> 150 mg/l 96 hours
NOEC (chronic)	0.16 mg/l Test organisms (species): Daphnia magna Duration: '16 d'
NOEC chronic fish	0.077 mg/l Test organisms (species): other:Cirrhina mrigala Duration: '60 d'
α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide (80-15-9)	
LC50 - Fish [1]	3.9 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: IUCLID)
EC50 - Crustacea [1]	18.84 mg/l Test organisms (species): Daphnia magna
ErC50 algae	3.1 mg/l
NOEC chronic algae	1 mg/l

12.2. Persistence and degradability

Cumene (98-82-8)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Cumene (98-82-8)	
BCF - Fish [1]	(35,5 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	3.55 (at 23 °C)
Partition coefficient n-octanol/water (Log Kow)	3.66

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Cumene (98-82-8)	
Bioaccumulative potential	Not established.
benzene (71-43-2)	
BCF - Fish [1]	3.5 – 4.4
Bioconcentration factor (BCF REACH)	> 2000
Partition coefficient n-octanol/water (Log Pow)	1.83
Bioaccumulative potential	not bioaccumulable.
phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
Partition coefficient n-octanol/water (Log Pow)	1.47
α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide (80-15-9)	
BCF - Fish [1]	(35,5 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	1.6 (at 25 °C (at pH 8.1))

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: U.S. - RCRA (Resource Conservation Recovery Act) - U Series Wastes - Acutely Toxic Wastes Other Hazardous Characteristics.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Consult the appropriate local waste disposal expert about waste disposal. Dispose of contents/container to comply with applicable local, national and international regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Do not re-use empty containers.
Ecological waste information	: Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1918	UN1918	1918	1918
14.2. Proper Shipping Name			
Isopropylbenzene	ISOPROPYLBENZENE	ISOPROPYLBENZENE	Isopropylbenzene
14.3. Transport hazard class(es)			
3	3	3	3
			

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DOT	TDG	IMDG	IATA
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT)	: UN1918
DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

TDG

UN-No. (TDG)	: UN1918
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 60 L
Emergency Response Guide (ERG) Number	: 130

IMDG

Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG)	: A
Flash point (IMDG)	: 31°C c.c.

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Properties and observations (IMDG) : Colourless liquid with a chloroform-like odour. Flashpoint: 31°C c.c. Explosive limits: 0.9% to 6.5%. Immiscible with water.

IATA

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y344
PCA limited quantity max net quantity (IATA) : 10L
PCA packing instructions (IATA) : 355
PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
ERG code (IATA) : 3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IBC product name: PROPYL BENZENE (ALL ISOMERS)

Ship type: 3

Pollution category: Y

SECTION 15: Regulatory information

15.1. US Federal regulations

Cumene (98-82-8)

Subject to reporting requirements of United States SARA Section 313
Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

benzene	CAS-No. 71-43-2
Toluene	CAS-No. 108-88-3
phenol, carboic acid, monohydroxybenzene, phenylalcohol	CAS-No. 108-95-2
Ethylbenzene	CAS-No. 100-41-4
α,α -dimethylbenzyl hydroperoxide, cumene hydroperoxide	CAS-No. 80-15-9

benzene (71-43-2)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	10 lb received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule
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Toluene (108-88-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb
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phenol, carboic acid, monohydroxybenzene, phenylalcohol (108-95-2)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb 500lb if the substance is solid in powder form with particle size less than 100 microns, or is in solution or molten form

Ethylbenzene (100-41-4)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

α,α-dimethylbenzyl hydroperoxide, cumene hydroperoxide (80-15-9)	
CERCLA RQ	10 lb

15.2. International regulations

Cumene (98-82-8)
Listed on IARC (International Agency for Research on Cancer) Listed on the NCI (Vietnam - National Chemical Inventory) Listed on Thailand Existing Chemicals Inventory (DIW)

benzene (71-43-2)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on the NCI (Vietnam - National Chemical Inventory) Listed on Thailand Existing Chemicals Inventory (DIW)

Toluene (108-88-3)
Listed on the NCI (Vietnam - National Chemical Inventory) Listed on Thailand Existing Chemicals Inventory (DIW)

n-Propylbenzene (103-65-1)
Listed on the NCI (Vietnam - National Chemical Inventory) Listed on Thailand Existing Chemicals Inventory (DIW)

Ethylbenzene (100-41-4)
Listed on IARC (International Agency for Research on Cancer)

sec-Butylbenzene (135-98-8)
Listed on the NCI (Vietnam - National Chemical Inventory) Listed on Thailand Existing Chemicals Inventory (DIW)

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Diisopropylbenzenes (25321-09-9)

Listed on the NCI (Vietnam - National Chemical Inventory)

tert-Butylbenzene (98-06-6)

Listed on the NCI (Vietnam - National Chemical Inventory)

Listed on Thailand Existing Chemicals Inventory (DIW)

.alpha.-Methylstyrene (98-83-9)

Listed on IARC (International Agency for Research on Cancer)

Listed on the NCI (Vietnam - National Chemical Inventory)

Listed on Thailand Existing Chemicals Inventory (DIW)

Cymenes (25155-15-1)

Listed on the NCI (Vietnam - National Chemical Inventory)

15.3. US State regulations

Cumene (98-82-8)

U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Minnesota - Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List



WARNING:

This product can expose you to Cumene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
benzene(71-43-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Minnesota - Hazardous Substance List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Maine - Chemicals of Concern
Toluene(108-88-3)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Minnesota - Hazardous Substance List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Maine - Chemicals of Concern
phenol, carboic acid, monohydroxybenzene, phenylalcohol(108-95-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

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Component	State or local regulations
n-Propylbenzene(103-65-1)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List
Ethylbenzene(100-41-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
sec-Butylbenzene(135-98-8)	U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List
Diisopropylbenzenes(25321-09-9)	U.S. - Maine - Chemicals of Concern
tert-Butylbenzene(98-06-6)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List
.alpha.-Methylstyrene(98-83-9)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Minnesota - Hazardous Substance List; U.S. - Massachusetts - Right To Know List
Cymenes(25155-15-1)	U.S. - New Jersey - Right to Know Hazardous Substance List
α,α -dimethylbenzyl hydroperoxide, cumene hydroperoxide(80-15-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to US HazCom 2012

Revision date : 18 June 2025
Other information : None.

Safety Data Sheet (SDS), USA - Braskem

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.