

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

1.1. Product identifier

Product form	: Substance
Trade name	: Benzene
Chemical name	: Benzene
EC index no	: 601-020-00-8
EC no	: 200-753-7
CAS No	: 71-43-2
REACH registration No	: 01-2119447106-44
Formula	: C ₆ H ₆
Product group	: Trade product

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 : Manufacture of substances

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 Nederland BV
Weena 238-240, 9th Floor, Tower C
NL - 3012 NJ – Rotterdam

Manufacturer:
BRASKEM S/A UNIB1 -BA
Rua Eteno, 1561 - Polo Petroquímico de Camacari - Bahia/BA
Brazil – Cep. 42810-000

BRASKEM S/A UNIB2-RS
BR 386-Rodovia Tabai/Canos - km 419 - Triunfo/RS
Brazil - Cep. 95853-000

BRASKEM S.A. UNIB2-SP
Av. Presidente Costa e Silva, 1178 – Capuava – Santo André – SP
Brasil – Cep. 09270-001

productsafety@braskem.com

1.4. Emergency telephone number

Emergency number : +31 10 205 2945 (business hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Muta. 1B	H340
Carc. 1A	H350
STOT RE 1	H372
Asp. Tox. 1	H304
Aquatic Chronic 3	H412

Full text of H-phrases: see section 16

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According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H340 - May cause genetic defects
H350 - May cause cancer (Dermal, Inhalation, oral)
H372 - Causes damage to organs (hematopoietic system) through prolonged or repeated exposure (Dermal, Inhalation, oral)
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (CLP)

: 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
P243 - Take precautionary measures against static discharge
P273 - Avoid release to the environment
P280 - Wear eye protection, face shield, protective clothing, protective gloves, face protection
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P331 - Do NOT induce vomiting
P501 - Dispose of contents/container to Comply with applicable local, national and international regulation.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Benzene
CAS No : 71-43-2
EC no : 200-753-7
EC index no : 601-020-00-8

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzene	(CAS No) 71-43-2 (EC no) 200-753-7 (EC index no) 601-020-00-8	100	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 3, H412

Full text of R-, H- and EUH-phrases: see section 16

Synonym: benzene; benzene and mixtures having 10% benzene or more)

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration. In case of breathing difficulties administer oxygen. Immediately get medical attention.

First-aid measures after skin contact : For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Rinse immediately with plenty of water (for at least 15 minutes). Immediately get medical attention. Discard contaminated clothing.

First-aid measures after eye contact : Rinse immediately and plentifully with water, also under the eyelids, for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention.

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First-aid measures after ingestion : Remove casualty to fresh air and keep warm and at rest. Do not induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). Give water to drink if victim completely conscious/alert. Never give anything by mouth to an unconscious person. Immediately get medical attention.

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

Symptoms/injuries : Headache. Nausea. Dizziness. Drowsiness. Loss of consciousness. Vomiting. Death in extreme cases.

Symptoms/injuries after inhalation : Subsequent observance for pneumonia and lung oedema. May cause respiratory irritation. Aspiration of this material may cause chemical pneumonia. Cough.

Symptoms/injuries after skin contact : Causes skin irritation. Prolonged/repetitive skin contact may cause skin defatting or dermatitis. Repeated exposure may cause skin dryness or cracking. Redness.

Symptoms/injuries after eye contact : Irritating to eyes. May cause destruction of eye tissue.

Symptoms/injuries after ingestion : Can occur: irritation. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Chronic symptoms : Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Loss of appetite. nasal, pallor and gingival bleeding.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : carbon dioxide (CO₂), dry chemical powder, foam. Water fog.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable liquid and vapour. This material can accumulate static charge by flow or agitation and can be ignited by static discharge. Vapours may cause fire/explosion if source of ignition is present. Heavier than air, vapours may travel long distances along ground, ignite and flash back to source. Under fire conditions closed containers may rupture or explode. On combustion forms: Carbon monoxide. Carbon dioxide. Formaldehyde. ketone.

Explosion hazard : Vapours can form explosive mixtures with air.

Reactivity : Benzene is spontaneously flammable when it is in contact with sodium and potassium peroxides. It may explode with chlorine, chromic anhydride, permanganic acid, peroxomonosulfuric and peroxodisulfuric acids . If recrystallized from benzene, organic perchlorates may explode. Benzene reacts vigorously with uranium hexafluoride . The nitrilic perchlorate and benzene reaction may generate light explosion and spark.

5.3. Advice for firefighters

Firefighting instructions : Do not approach fire except upwind and only with proper skin and respiratory protection (supplied air only). Cool closed containers exposed to fire with water spray.

Protective equipment for firefighters : Extra personal protection: complete protective clothing including self-contained breathing apparatus. In case of fire: Wear self-contained breathing apparatus. Refer to section 8.

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 gloves, and eye/face protection. Refer to section 8.

Emergency procedures : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. Refer to section 8.

Emergency procedures : Eliminate leaks immediately. Eliminate all ignition sources if safe to do so. Ventilate affected area. do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

6.2. Environmental precautions

Absorb remaining liquid with sand or inert absorbent and remove to safe place. Avoid discharge to the environment. Do not flush down sewers. Do not allow to enter into surface water or drains. Do not allow run-off from fire fighting to enter drains or water courses. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Ventilate affected area.

Methods for cleaning up : Prevent spread over a wide area (e.g. by containment or oil barriers). Collect spills and put it into appropriated container. Keep the recovered product for subsequent recycling.

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Other information : Granulated activated charcoal associated to bioremediation demonstrated to be the best remotion system from contaminated water bodies . Recovery of the polluted soil and water remediation can be done through the Fenton reaction.

6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only non-sparking tools. Spilled product must never be returned to the original container for recycling. Use grounded electrical/mechanical equipment. Provide earthing of containers, equipment, pumps and ventilation facilities. Ground/bond container and receiving equipment. Avoid producing mist or vapors by heating of opened recipient.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : The air vapors concentration should be maintained lower than the TECHNOLOGICAL REFERENCE VALUE (TRV) 1.0 ppm v/v.

Storage conditions : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep in original containers closed. Keep stored the least quantity possible. Store at room temperature. Store in dry, cool, well-ventilated area.

Incompatible materials : Oxidizing agents. Strong acid. Halogenated compounds.

Packaging materials : stainless steel. Carbon steel. PVC.

7.3. Specific end use(s)

This substance/product is registered with strictly controlled conditions as defined in Article 18(4) of Regulation (EC) No. 1907/2006 (REACH Regulation) and must therefore be handled as such.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Benzene (71-43-2)		
Austria	MAK (mg/m ³)	3.2 mg/m ³ H
Austria	MAK (ppm)	1 ppm H
Austria	MAK Short time value (mg/m ³)	12.8 mg/m ³ H [MaxMinSchichtE1 "4x15"]
Austria	MAK Short time value (ppm)	4 ppm H [MaxMinSchichtE1 "4x15"]
Belgium	Limit value (mg/m ³)	3.25 mg/m ³
Belgium	Limit value (ppm)	1 ppm
Belgium	Remark*	C, D
Bulgaria	OEL TWA (mg/m ³)	3.25 mg/m ³
Cyprus	OEL TWA (mg/m ³)	3.25 mg/m ³
Cyprus	OEL TWA (ppm)	1 ppm
France	VME (mg/m ³)	3.25 mg/m ³ (restrictive limit)
France	VME (ppm)	1 ppm (restrictive limit)
Greece	OEL TWA (mg/m ³)	3.19 mg/m ³
Greece	OEL TWA (ppm)	1.0 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.5 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	2.5 ppm
Italy	OEL TWA (mg/m ³)	3.25 mg/m ³
Italy	OEL TWA (ppm)	1 ppm
Latvia	OEL TWA (mg/m ³)	3.25 mg/m ³
Latvia	OEL TWA (ppm)	1 ppm
USA IDLH	US IDLH (ppm)	500 ppm
USA NIOSH	NIOSH REL (TWA) (ppm)	0.1 ppm
USA NIOSH	NIOSH REL (STEL) (ppm)	1 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	5 ppm (see 29 CFR 1910.1028)
USA OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm
Spain	VLA-ED (mg/m ³)	3.25 mg/m ³ (manufacturing, commercialization, and use restrictions under REACH)
Spain	VLA-ED (ppm)	1 ppm (manufacturing, commercialization, and use restrictions under REACH)
Switzerland	VME (mg/m ³)	1.6 mg/m ³
Switzerland	VME (ppm)	0.5 ppm

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Benzene (71-43-2)		
The Netherlands	MAC TGG 8H (mg/m³)	3.25 mg/m³
United Kingdom	WEL TWA (mg/m³)	3.25 mg/m³
United Kingdom	WEL TWA (ppm)	1 ppm
United Kingdom	WEL STEL (mg/m³)	9.75 mg/m³ (calculated)
United Kingdom	WEL STEL (ppm)	3 ppm (calculated)
Czech Republic	Expoziční limity (PEL) (mg/m³)	3 mg/m³
Czech Republic	Expoziční limity (PEL) (ppm)	0.939 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m³)	10 mg/m³
Czech Republic	Expoziční limity (NPK-P) (ppm)	3.13 ppm
Czech Republic	Remark (CZ)	D, P
Denmark	Grænseværdie (langvarig) (mg/m³)	1.6 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	0.5 ppm
Finland	HTP-arvo (8h) (mg/m³)	3.25 mg/m³
Finland	HTP-arvo (8h) (ppm)	1 ppm
Hungary	MK-érték	3 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	3 mg/m³
Ireland	OEL (8 hours ref) (ppm)	1 ppm
Lithuania	TPRV (mg/m³)	19 mg/m³
Lithuania	TPRV (ppm)	6 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m³)	3 mg/m³
Norway	Gjennomsnittsverdier (AN) (ppm)	1 ppm
Norway	Gjennomsnittsverdier (Kortidsverdi) (mg/m³)	6 mg/m³
Norway	Gjennomsnittsverdier (Kortidsverdi) (ppm)	3 ppm
Poland	NDS (mg/m³)	1.6 mg/m³
Romania	OEL TWA (mg/m³)	3.25 mg/m³
Romania	OEL TWA (ppm)	1 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	1.5 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	0.5 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	9 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	3 ppm
Canada (Quebec)	VECD (mg/m³)	15.5 mg/m³
Canada (Quebec)	VECD (ppm)	5 ppm
Canada (Quebec)	VEMP (mg/m³)	3 mg/m³
Canada (Quebec)	VEMP (ppm)	1 ppm
Portugal	OEL TWA (ppm)	0.5 ppm
Portugal	OEL STEL (ppm)	2.5 ppm
Portugal	OEL chemical category (PT)	A1 - Confirmed Human Carcinogen,skin - potential for cutaneous exposure

benzene (71-43-2)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	234 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.25 mg/m³/day
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.1404 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.25 mg/m³/day
Long-term - systemic effects, dermal	234 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	1.9 mg/l
PNEC aqua (marine water)	1.9 mg/l
PNEC aqua (intermittent, freshwater)	1.9 mg/l
PNEC aqua (intermittent, marine water)	1.9 mg/l
PNEC (Sediment)	

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benzene (71-43-2)	
PNEC sediment (freshwater)	33 mg/kg dwt
PNEC sediment (marine water)	33 mg/kg dwt
PNEC (Soil)	
PNEC soil	4.8 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	Not applicable
PNEC (STP)	
PNEC sewage treatment plant	39 mg/l

DNEL : 234 mg/l

PNEC : 1.9 mg/l

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation to minimize vapour concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Protective goggles. Protective clothing. Gloves. Self-contained breathing apparatus.



Hand protection : protective gloves. PVC, PVA and PVAL.

Eye protection : Safety goggles.

Skin and body protection : Use protective coverall.

Respiratory protection : Half face mask with filter for organic vapors to 10 ppm concentrations exposure. full-facepiece mask with organic vapor filter until 100 ppm exposure concentration. If there is any possibility of uncontrolled emissions or entering in instances where the exposure levels are unknown use a full-facepiece positive-pressure, air-supplied respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colorless to yellowish
odour	: characteristic. aromatic hydrocarbons.
Odour threshold	: No data available
pH	: not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 5,5 °C
Freezing point	: not applicable
Boiling point	: 80 °C
Flash point	: - 11 °C
Self ignition temperature	: 498 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable
Vapour pressure	: 77 mmHg @ 20°C
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0,88 g/cm ³
Solubility	: Slightly soluble in Water.Soluble in ethanol, acetone, diethyl ether, chloroform, carbon disulfide, carbon tetrachloride, oils.
Log Pow	: 1,18 – 1,9 also reported 2,13 – 2,15
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: not applicable.
Explosive properties	: not applicable.
Oxidising properties	: not applicable.
Explosive limits	: 1,3 – 8,0 vol %

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Benzene is spontaneously flammable when it is in contact with sodium and potassium peroxides. It may explode with chlorine, chromic anhydride, permanganic acid, peroxomonosulfuric and peroxodisulfuric acids. If recrystallized from benzene, organic perchlorates may explode. Benzene reacts vigorously with uranium hexafluoride. The nitrilic perchlorate and benzene reaction may generate light explosion and spark.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid static electricity discharges.

10.5. Incompatible materials

Oxidizing agents. strong acids. Halogenated compounds.

10.6. Hazardous decomposition products

Carbon dioxide (CO₂). Carbon monoxide. Formaldehyde. ketone.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

benzene (71-43-2)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 8260 mg/kg
LC50 inhalation rat (mg/l)	44.5 mg/l/4h

Benzene (71-43-2)	
LD50 dermal rabbit	> 8260 mg/kg
LC50 inhalation rat (mg/l)	44.5 mg/l/4h
LC50 inhalation rat (ppm)	13050 - 14380 ppm/4h

Skin corrosion/irritation	: Causes skin irritation. Prolonged/repetitive skin contact may cause skin defatting or dermatitis. pH: not applicable
Serious eye damage/irritation	: Causes serious eye irritation. May cause irritation to the respiratory tract and to other mucous membranes pH: not applicable
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer (Dermal, Inhalation, oral).
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs (hematopoietic system) through prolonged or repeated exposure (Dermal, Inhalation, oral).

benzene (71-43-2)	
LOAEL (oral,rat,90 days)	25 - 50 mg/kg bodyweight/day (males and females)
LOAEL (inhalation,rat,gas,90 days)	10 ppmV/6h/day (mice)
NOAEL (oral,rat,90 days)	(No NOAEL could be determined)
NOAEL (inhalation,rat,gas,90 days)	30 ppmV/6h/day

Aspiration hazard : May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

benzene (71-43-2)	
LC50 fishes 1	5.3 mg/l

Benzene (71-43-2)	
LC50 fishes 1	10.7 - 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	8.76 - 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 other aquatic organisms 1	29 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC50 fish 2	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

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Benzene (71-43-2)	
EC50 Daphnia 2	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

benzene (71-43-2)	
Persistence and degradability	Readily biodegradable. not persistent.

Benzene (71-43-2)	
Persistence and degradability	Readily biodegradable. not persistent.

12.3. Bioaccumulative potential

benzene (71-43-2)	
Bioconcentration factor (BCF REACH)	> 2000
Log Pow	2.13
Bioaccumulative potential	not bioaccumulable.

Benzene (71-43-2)	
BCF fish 1	3.5 - 4.4
Bioconcentration factor (BCF REACH)	> 2000
Log Pow	1.83
Bioaccumulative potential	not bioaccumulable.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

benzene (71-43-2)	
Results of PBT assessment	This substance does not meet the criteria for classification as PBT or vPvB.
Component	
Benzene (71-43-2)	This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose of contents/container to comply with applicable local, national and international regulations. Consult the appropriate authorities about waste disposal.
Waste disposal recommendations	: Dispose of this material and its container at hazardous or special waste collection point.

SECTION 14: Transport information

Classification for ROAD and RAIL transport: ADR / RID

14.1 UN Number	: UN1114
14.2 Proper shipping name	: BENZENE
14.3 Class	: 3
14.4 Packing group	: II
14.5 Environmental hazards	: Not considered environmentally hazardous based on available data
14.6 Special precautions for user	: Hazard Identification Number: 33

Classification for SEA transport: IMO - IMDG

14.1 UN Number	: UN1114
14.2 Proper Shipping Name	: BENZENE
14.3 Class	: 3
14.4 Packing group	: II
14.5 Environmental hazards	: Not considered marine pollutant based on available data
14.6 Special precautions for user	: No additional information available
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:

Product name : Benzene and mixtures having 10% benzene or more (i)

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Classification for AIR transport: IATA - ICAO

14.1 UN Number	: UN1114
14.2 Proper Shipping Name	: Benzene
14.3 Class	: 3 – Flammable liquids
14.4 Packing group	: II
14.5 Environmental hazards	: Not considered environmentally hazardous based on available data

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

CSA is not needed for intermediates used under strictly conditions.

SECTION 16: Other information

Indication of changes:

Classification of substance has been revised.

Sources of Key data : MSDS.

Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists). ASTM - American Society for Testing and Materials . CAS (Chemical Abstracts Service) number. CLP - Classification, Labelling and Packaging. EEC - European Economic Community. EC - European Community. CSR - Chemical Safety Report. GHS - Globally Harmonised System. IARC (International Agency for Research on Cancer). Overland transport (ADR). PVC (Polyvinyl chloride). REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals. SDS - Safety Data Sheet.

Full text of R-, H- and EUH-phrases::

Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	flammable liquids Category 2
Muta. 1B	flammable liquids Category 1 flammable liquids Category 3
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H340	May cause genetic defects
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects
R11	Highly flammable
R36/38	Irritating to eyes and skin
R45	May cause cancer
R46	May cause heritable genetic damage
R48/23/24/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R65	Harmful: may cause lung damage if swallowed
F	Highly flammable
T	Toxic
Xi	Irritant

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Xn	Harmful
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SDS EU (REACH Annex II)

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