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

1.1. Product identifier

Product form : Substance
Trade name/designation : Benzene
Chemical name : Benzene
EC Index : 601-020-00-8
EC-No. : 200-753-7
CAS-No. : 71-43-2
REACH registration No : 01-2119447106-44-0104
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 : transported isolated intermediate

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Trafigura Ventures V.B.V.
Evert van de Beekstraat 1-82
The Base, Tower B - 5th Floor
1118 CL Schiphol - The Netherlands
T +31 20 504 1800
TrafiguraReach@trafigura.com

1.4. Emergency telephone number

Emergency number : +32 3 575 03 30
This telephone number is available 24 hours per day, 7 days per week.


Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)

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

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Full text of H statements : see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word :

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.
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks
P243 - Take action to prevent static discharges.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P301+P310+P331 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER. Do NOT induce vomiting.
P403+P235 - Store in a well-ventilated place. Keep cool.

Extra phrases :

Restricted to professional users

Listed in Annex VI :

EC Index-No. : 601-020-00-8

2.3. Other hazards

Other hazards :

PBT/vPvB data : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance name :

BENZENE

CAS-No. :


71-43-2

EC-No. :

200-753-7

EC Index :

601-020-00-8

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Substance 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) 601-020-00-8 (REACH-no) 01-2119447106-44-0104	99,9 - 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

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice	: First aider: Pay attention to self-protection. Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance. Treat symptomatically.
Inhalation	: Keep at rest. Provide fresh air. Give oxygen or artificial respiration if necessary. Call a physician immediately.
Skin contact	: After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. In case of doubt or persistent symptoms, consult always a physician.
Eyes contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If symptoms persist, call a physician.
Ingestion	: Call a physician immediately. Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Do not give milk or alcoholic beverages.

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

Inhalation	: Vapours may cause drowsiness and dizziness. May cause respiratory irritation. Toxic: danger of serious damage to health by prolonged exposure through inhalation.
Skin contact	: Irritating to skin. Toxic: danger of serious damage to health by prolonged exposure in contact with skin.
Eyes contact	: Irritating to eyes.
Ingestion	: Harmful: may cause lung damage if swallowed. Toxic: danger of serious damage to health by prolonged exposure if swallowed. Smallest quantities reaching the lungs through swallowing or subsequent vomiting may result in lung oedema or pneumonia. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache). May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Chronic symptoms	: May cause cancer. May cause genetic defects. May cause damage to organs through prolonged or repeated exposure.


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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.
Unsuitable extinguishing media	: Strong water jet.

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5.2. Special hazards arising from the substance or mixture

Specific hazards	: Evacuate personnel to a safe area. Vapours are heavier than air and may spread along floors. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.
Explosion hazard	: Vapours may form explosive mixture with air. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.
Hazardous decomposition products in case of fire	: Carbon oxides (CO, CO ₂).

5.3. Advice for firefighters

Firefighting instructions	: Special protective equipment for firefighters. See also section 8.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel	: Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothing. Provide adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixture with air. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.
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6.1.2. For emergency responders

For emergency responders	: Ensure procedures and training for emergency decontamination and disposal are in place.
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6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Remove all sources of ignition. Use only non-sparking tools. Provide adequate ventilation. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Keep in suitable, closed containers for disposal. Stop leak if safe to do so. Delivery to an approved waste disposal company. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.
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6.4. Reference to other sections

Concerning disposal elimination after cleaning, see section 13. Concerning personal protective equipment to use, see section 8 .

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: This substance should be handled under strictly controlled conditions as specified in REACH regulation article 18(4). Site documentation to support safe handling arrangements in accordance with risk-based management system should be available at each manufacturing site. During the whole lifecycle all necessary measures should be undertaken to minimize emissions and any resulting exposure. Use product only in closed system. Concerning personal protective equipment to use, see section 8. Do not smoke. Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapour/aerosol. After use replace the closing cap immediately. Do not burn, or use a cutting torch on the empty drum. Do not pierce or burn, even after use. Ensure equipment is adequately earthed.
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Hygiene measures : Keep good industrial hygiene. Wash hands and face before breaks and immediately after handling of the product. When using do not eat, drink or smoke. Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Do not store near or with any of the incompatible materials listed in section 10. Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible substances or mixtures : Strong acids. Oxidizing agent.

Heat and ignition sources : Keep away from open flames, hot surfaces and sources of ignition. Do not smoke.

Packaging materials : Keep only in the original container.


7.3. Specific end use(s)

transported isolated intermediate.


SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Benzene (71-43-2)		
EU	IOELV TWA (mg/m ³)	3,25 mg/m ³ (measured or calculated in relation to a reference period of eight hours)
EU	IOELV TWA (ppm)	1 ppm (measured or calculated in relation to a reference period of eight hours)
EU	Notes	Substantial contribution to the total body burden via dermal exposure possible
Austria	TEL TRK (mg/m ³)	3,2 mg/m ³
Austria	TEL TRK (ppm)	1 ppm
Belgium	Limit value (mg/m ³)	3,25 mg/m ³
Belgium	Limit value (ppm)	1 ppm
Bulgaria	OEL TWA (mg/m ³)	3,25 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	3,25 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1 ppm
Cyprus	OEL TWA (mg/m ³)	3,25 mg/m ³
Cyprus	OEL TWA (ppm)	1 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	3 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	1,6 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	0,5 ppm
Estonia	OEL TWA (mg/m ³)	1,5 mg/m ³
Estonia	OEL TWA (ppm)	0,5 ppm
Estonia	OEL STEL (mg/m ³)	9 mg/m ³
Estonia	OEL STEL (ppm)	3 ppm
Finland	HTP-arvo (8h) (mg/m ³)	3,25 mg/m ³ (all works)
Finland	HTP-arvo (8h) (ppm)	1 ppm (all works)
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 ppm
Hungary	MK-érték	3 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	3 mg/m ³

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Benzene (71-43-2)		
Ireland	OEL (8 hours ref) (ppm)	1 ppm
Ireland	OEL (15 min ref) (mg/m ³)	9 mg/m ³ (calculated)
Ireland	OEL (15 min ref) (ppm)	3 ppm (calculated)
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
Lithuania	IPRV (mg/m ³)	3,25 mg/m ³
Lithuania	IPRV (ppm)	1 ppm
Lithuania	TPRV (mg/m ³)	19 mg/m ³
Lithuania	TPRV (ppm)	6 ppm
Luxembourg	OEL TWA (mg/m ³)	3,25 mg/m ³
Luxembourg	OEL TWA (ppm)	1 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0,7 mg/m ³
Poland	NDS (mg/m ³)	1,6 mg/m ³
Portugal	OEL TWA (ppm)	0,5 ppm
Portugal	OEL STEL (ppm)	2,5 ppm
Romania	OEL TWA (mg/m ³)	3,25 mg/m ³
Romania	OEL TWA (ppm)	1 ppm
Slovenia	OEL TWA (mg/m ³)	3,25 mg/m ³
Slovenia	OEL TWA (ppm)	1 ppm
Slovenia	OEL STEL (mg/m ³)	13 mg/m ³
Slovenia	OEL STEL (ppm)	4 ppm
Spain	VLA-ED (mg/m ³)	3,25 mg/m ³ (manufacturing, commercialization and use restrictions according to REACH)
Spain	VLA-ED (ppm)	1 ppm (manufacturing, commercialization and use restrictions according to REACH)
Sweden	nivågränsvärde (NVG) (mg/m ³)	1,5 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	0,5 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	9 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	3 ppm
United Kingdom	WEL TWA (mg/m ³)	3,25 mg/m ³
United Kingdom	WEL TWA (ppm)	1 ppm
United Kingdom	WEL STEL (mg/m ³)	9,75 mg/m ³ (calculated)
United Kingdom	WEL STEL (ppm)	3 ppm (calculated)
Norway	Grenseverdier (AN) (mg/m ³)	3 mg/m ³
Norway	Grenseverdier (AN) (ppm)	1 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	6 mg/m ³ (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	2 ppm (value calculated)
Switzerland	MAK (mg/m ³)	1,6 mg/m ³
Switzerland	MAK (ppm)	0,5 ppm

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Australia	TWA (mg/m ³)	3,2 mg/m ³
Australia	TWA (ppm)	1 ppm
Canada (Quebec)	VECD (mg/m ³)	15,5 mg/m ³
Canada (Quebec)	VECD (ppm)	5 ppm
Canada (Quebec)	VEMP (mg/m ³)	3 mg/m ³
Canada (Quebec)	VEMP (ppm)	1 ppm
USA - ACGIH	ACGIH TWA (ppm)	0,5 ppm
USA - ACGIH	ACGIH STEL (ppm)	2,5 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)	10 ppm 1 ppm
USA - OSHA	OSHA PEL (STEL) (ppm)	5 ppm (see 29 CFR 1910.1028)
USA - OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm

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/m ³
DNEL/DMEL (general population)	
Long-term - systemic effects, oral	0,0001404 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0,00325 mg/m ³
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)	
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 (STP)	
PNEC sewage treatment plant	39 mg/l

8.2. Exposure controls

Engineering measure(s)

: This substance should be handled under strictly controlled conditions as specified in REACH regulation article 18(4). Site documentation to support safe handling arrangements in accordance with risk-based management system should be available at each manufacturing site. During the whole lifecycle all necessary measures should be undertaken to minimize emissions and any resulting exposure. Use product only in closed system. Use only in area provided with appropriate exhaust ventilation. Provide adequate ventilation. Take precautionary measures against static discharge. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7.


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Personal protective equipment	: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hand protection	: Protective gloves (EN 374). PVA. Breakthrough time : >360min. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.
Eye protection	: Safety glasses with side-shields. Goggles. EN 166
Body protection	: Overalls, apron and boots recommended.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140). full face mask (DIN EN 136). Filter type: (Type A - EN 141). Self-contained open-circuit compressed air breathing apparatus (EN 137) .
Thermal hazard protection	: Not required for normal conditions of use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: liquid.
Molecular weight	: 78,12 g/mol
Colour	: clear.
Odour	: Characteristic. aromatic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: 5,5 °C
Freezing point	: No data available
Initial boiling point and boiling range	: 80,1 °C
Flash point	: -11 °C (1013,5 kPa)
Auto-ignition temperature	: 498 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 10 kPa (20°C) 100 kPa (79,7°C)
Vapour density	: No data available
Relative density	: 0,8765 (20°C)
Solubility	: Water: 1,88 g/l (23°C)
Partition coefficient n-octanol/water	: 2,13
Kinematic viscosity	: No data available
Dynamic viscosity	: No data available
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	: LEL- UEL: 1,2 - 7,8 vol %

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9.2. Other information

VOC content : 100 %
 Additional information : Literary reference

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable. Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air. See also section 7. Handling and storage.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. See also section 7. Handling and storage.

10.5. Incompatible materials

Incompatible with strong acids and oxidizing agents. See also section 7. Handling and storage.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours. Possible decomposition products are: Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Benzene (71-43-2)	
LD50/oral/rat	> 2000 mg/kg
LD50/dermal/rabbit	> 5000 mg/kg
LC50 inhalation rat (Vapours - mg/l/4h)	44,5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
 pH: No data available

Serious eye damage/irritation : Causes serious eye irritation.
 pH: No data available

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met.)

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

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 : Causes damage to organs through prolonged or repeated exposure.

Benzene (71-43-2)	
NOAEC, Chronic, Inhalation, human, systemic	11.2 mg/m ³

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

Other adverse effects : Mutagenetic. carcinogenic.

Other information : Symptoms related to the physical, chemical and toxicological characteristics.
 Reference to other sections: 4.2.

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SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : not hazardous.

Benzene (71-43-2)	
LC50 fish 1	eco mg/l (96 h)
EC50 Daphnia 1	10 mg/l (48h)
ErC50 (algae)	100 mg/l (72 h)
LOEC (chronic)	1,6 mg/l
NOEC (chronic)	3 mg/l Invertebrates.
NOEC chronic fish	0,8 mg/l
NOEC chronic crustacea	3 mg/l
NOEC chronic algae	≈
ErC10, BIOMASS, 72h, algae	10 mg/l
ErC10, Growth rate, 72h, algae	34 mg/l
IC50, 24h, micro-organisms	13 mg/l

12.2. Persistence and degradability

Benzene (71-43-2)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Benzene (71-43-2)	
Partition coefficient n-octanol/water	2,13
Benzene (71-43-2)	
Bioconcentration factor (BCF)	< 10
Partition coefficient n-octanol/water	2,13

12.4. Mobility in soil

Benzene (71-43-2)	
Ecology - soil	No data available.
Benzene (71-43-2)	
Surface tension	Justification for data waiving

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available


SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Handle with care. Safe handling: see section 7. Handling and storage. Dispose of contaminated materials in accordance with current regulations. Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility.

Additional information : Delivery to an approved waste disposal company.






Further ecological information : Do not allow to enter into surface water or drains.

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European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Classified as hazardous waste according to European Union regulations.
The following Waste Codes are only suggestions:
150110 - packaging containing residues of or contaminated by dangerous substances
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information


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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1114	1114	1114	1114	1114
14.2. UN proper shipping name				
BENZENE	BENZENE	Benzene	BENZENE	BENZENE
Transport document description				
UN 1114 BENZENE, 3, II, (D/E)	UN 1114 BENZENE, 3, II (-11°C c.c.)	UN 1114 Benzene, 3, II	UN 1114 BENZENE, 3, II	UN 1114 BENZENE, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
ADN : N3				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33

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Orange plates :

33
1114

Tunnel restriction code : D/E
EAC code : 3WE
APP code : A(fl)

- Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Flash point (IMDG) : -11°C c.c.
Properties and observations (IMDG) : Colourless liquid with a characteristic odour. Flashpoint: -11°C c.c. Explosive limits: 1.4% to 8% Freezing point 5°C, flashes below its freezing point. Immiscible with water. Narcotic. Exposure to this substance may produce serious chronic effects of a toxic nature.

- Air transport


PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3H

- Inland waterway transport

Classification code (ADN) : F1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2

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Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

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

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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Benzene - Benzene
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	Benzene - Benzene
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Benzene - Benzene
5. Benzene	Benzene - Benzene
28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Carcinogen category 1A or 1B (Table 3.1) or Carcinogen category 1 or 2 (Table 3.2) and listed as follows: Carcinogen category 1A (Table 3.1)/Carcinogen category 1 (Table 3.2) listed in Appendix 1 Carcinogen category 1B (Table 3.1)/Carcinogen category 2 (Table 3.2) listed in Appendix 2	Benzene - Benzene
29. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Germ cell Mutagen category 1A or 1B (Table 3.1) or Mutagen category 1 or 2 (Table 3.2) and listed as follows: Mutagen category 1A (Table 3.1)/Mutagen category 1 (Table 3.2) listed in Appendix 3 Mutagen category 1B (Table 3.1)/Mutagen category 2 (Table 3.2) listed in Appendix 4	Benzene - Benzene
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Benzene - Benzene


Benzene is not on the REACH Candidate List

Benzene is not on the REACH Annex XIV List

VOC content : 100 %

15.1.2. National regulations

Germany

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Reference to AwSV : Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 29)

Risk classification according to VbF : A I - Liquids with a flashpoint below 21°C

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

TA Luft : Carcinogenic substances

Netherlands

Waterbezwaarlijkheid : 1 - May cause cancer Z (1)

SZW-lijst van kankerverwekkende stoffen : BENZENE is listed

SZW-lijst van mutagene stoffen : BENZENE is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Recommendations Danish Regulation :

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out


SECTION 16: Other information

Indication of changes:

1		Modified	
2		Modified	
15		Modified	
16		Modified	

Abbreviations and acronyms:

ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods Code
LEL = Lower Explosive Limit/Lower Explosion Limit
UEL = Upper Explosion Limit/Upper Explosive Limit
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
CSR = CSR = Chemical Safety Report
DNEL = DNEL = Derived No Effect Level
LD50 = Median lethal dose
PNEC = Predicted No Effect Concentration
STEL = Short term exposure limit
TLV = Threshold limits
TWA = time weighted average
WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

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Sources of key data used to compile the datasheet : European Chemicals Bureau Chemical Safety Report. ECHA website.

Training advice : Training staff on good practice.

Full text of H- and EUH-statements:

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	Germ cell mutagenicity, hazard categories 1B
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.
	Restricted to professional users

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
 Classification according to Regulation (EC) No. 1272/2008 [CLP]
 Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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