



SAFETY DATA SHEET
BTX FRACTION

Date of issue: 13/07/2004

Revision: 01/08/2011 – 9th issue

Modification: 01/11/2016 – 9(4)

Replaces: 01/12/2010 – 8th issue

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY /UNDERTAKING

1.1 Product identifier

The table contains identifiers (names and identification numbers) of the product which is marketed under the following business name:

BTX FRACTION

DATA SOURCE FOR IDENTIFICATION	IDENTIFIERS	
	NAME OF SUBSTANCE	IDENTIFICATION NO.
Registration in accordance with REACH Regulation	Name on registration: Hydrocarbons, C5-7, C6-rich, ethylene manuf. by-products (LOA Category H)	Registration no.: 01-2119475793-25-0001
List of harmonized classifications (Annex VI of CLP)	Name in the list: Substance is not in the list	Index no.: Substance is not in the list
ECHA database of classifications and labels	Name indicated in the database: Hydrocarbons, C5-7, C6-rich, ethylene manuf. by-products	-
Other sources	International chemical name: Hydrocarbons, C5-7, C6-rich, ethylene manuf. by-products	CAS no.: 91723-50-1 EC no.: 294-557-9

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

2.1.1 Relevant identified uses

Intermediate for the production of chemicals used during its whole life cycle under strictly controlled conditions defined in Art. 18(4) of Regulation (EC) no. 1907/2006 REACH – see sect.16.

2.1.2 Uses advised against

The substance has been registered as transported isolated intermediate used during its whole life cycle under strictly controlled conditions defined in Art. 18(4) Regulation (EC) no. 1907/2006 REACH – see sect.16, and therefore it must not be handled differently.

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

- UNIPETROL RPA, s.r.o. (Ltd)

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- MINISTRY OF HEALTH CENTRE

Toxicological Information Centre (TIC)

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Na bojišti 1, 120 00 Prague 2, Czech Republic

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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture





The product is classified as hazardous according to Regulation (EC) no. 1272/2008 CLP:

HIGHLY FLAMMABLE LIQUID AND VAPOUR (CATEGORY 2)
 CARCINOGENIC (CATEGORY 1A)
 MUTAGENICITY (CATEGORY 1B)
 REPRODUCTION TOXICITY (CATEGORY 2)
 SKIN CORROSION / IRRITATION (CATEGORY 2)
 SERIOUS EYE DAMAGE / IRRITATION (CATEGORY 2)
 SPECIFIC TARGET ORGAN TOXICITY, REPEATED EXPOSURE (CATEGORY 1)
 SPECIFIC TARGET ORGAN TOXICITY, SINGLE EXPOSURE (CATEGORY 3)
 ASPIRATION HAZARD (CATEGORY 1)
 AQUATIC HAZARD (CATEGORY 2)

Flam. Liq. 2, H 225
Carc. 1A, H 350
Muta. 1B, H 340
Repr. 2, H 361(d)
Skin. Irrit. 2, H 315
Eye Irrit. 2, H 319
STOT RE 1, H 372
STOT SE 3, H 336
Asp. Tox. 1, H 304
Aquatic Chronic 2, H 411

Note. Full wording of the H and EUH phrases is indicated in section 16

2.2 Label elements

<i>Product identifiers</i>	BTX FRACTION HYDROCARBONS C5-7, C6-RICH, ETHYLENE MANUF. BY-PRODUCTS CAS no.: 91723-50-1
<i>Hazard pictogram(s)</i>	   
<i>Signal word</i>	DANGER
<i>Hazard statements (H-phrases)</i>	H225 Highly flammable liquid and vapour H304 May be fatal if swallowed and enters airways H315 Causes skin irritation H319 Causes serious eye irritation H336 May cause drowsiness or dizziness H340 May cause genetic defects H350 May cause cancer H361d Suspected of damaging the unborn child H372 Causes damage to organs through prolonged or repeated exposure H411 Toxic to aquatic life with long lasting effects



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<i>Precautionary statements (P-phrases)</i>	P202 P210 P243 P260 P273 P280 P301+P310 P331	Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces – No smoking. Take precautionary measures against static discharge. Do not breathe vapours. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Do NOT induce vomiting.
<i>Additional information</i>		Only for professional users.
UNIPETROL RPA, s.r.o. (Ltd) Záluží 1, 436 70 Litvínov, Czech Republic ☎: +420 476 161 111, +420 476 163 111		

2.3 Other hazards

The liquid quickly evaporates, its vapours are easily inflammable and form explosive mixtures with air. The vapour are heavier than air and thus accumulates and spreads along the ground, and in case of accidental leakage can cause after initiation combustion or explosion even at a greater distance from the leak source. The product practically does not dissolve in water and floats above the water surface and can form explosive mixtures with air. Risk of explosion and subsequent combustion therefore exists if the product leaks into sewerage.

The product is classified as hazardous when inhaled. It means that after ingestion and subsequent vomiting there is a risk of aspiration (the product entering the lungs) and danger of chemical pneumonia (pulmonary edema), which may be fatal. The product is further classified as carcinogenic and mutagenic. Its major component is benzene, to which chronic exposure can cause damage to bone marrow, haematopoiesis and development of leukaemia.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance name:	BTX fraction (see subsection 1.1 for further names 1.1)	
INDEX No. :	None	
CAS No. :	91723-50-1	
EC No. :	294-557-9	
<i>This UVCB substance contains the following components</i> <ul style="list-style-type: none">• in a concentration $\geq 10\%$ or• influencing the UVCB classification	NAME:	IDENTIFIER:
	benzene	benzene (index 601-020-00-8, CAS 71-43-2, ES 200-753-7)
	toluene	toluene (index 601-021-00-3, CAS 108-88-3, ES 203-625-9)
	ethylbenzene	ethylbenzene (index 601-023-00-4, CAS 100-41-4, ES 202-849-4)
	xylenes	xylene (index 601-022-00-9, CAS 1330-20-7, ES 215-535-7)

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 General information

Ensure that all vital body functions are working. When at risk of losing consciousness, transport the patient in stabilized position. Never give anything orally to an unconscious victim.

If possible and with respect to your own safety, transport the patient out of the danger area and remove all contaminated clothing and shoes.

Get specialized medical help.

4.1.2 Following inhalation

Move the victim to fresh air, keep him/her warm and get specialized medical help.

4.1.3 Following skin contact

Remove contaminated clothing and shoes. Thoroughly wash the affected areas with water (ideally tepid) and with soap. Get specialized medical help.

4.1.4 Following eye contact

Immediately begin to rinse the eyes while you hold the eye lids wide open, using flowing tepid water, continue for at least 15 minutes. If applicable remove contact lenses before rinsing the eyes. Get specialized medical help.

4.1.5 Following ingestion

If the victim is conscious, rinse his/her mouth with water, but NEVER INDUCE VOMITING! If vomiting occurs spontaneously, keep the victim's head below the hips level to prevent aspiration. Get medical help urgently.

4.2 Most important symptoms and effects, both acute and delayed

Based on the size of the exposure, the substance may cause a headache, sore throat, coughing, breathing difficulties, chest pressure, malfunction of the central nervous system, nausea, sleepiness and dizziness. Ingestion may lead to abdomen spasms, spontaneous vomiting with a risk of the substance penetrating the lungs resulting in lung edema (chemical pneumonia), which may even cause death. Direct contact with eyes or skin may cause irritation. Prolonged exposure of the skin to the substance may lead to its excessive dryness causing fissures.

4.3 Indication of any immediate medical attention and special treatment needed

Get immediate medical attention when the substance is swallowed or when it enters the airways.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: low expansion foam, spray or water fog.

Unsuitable extinguishing media: direct water stream.

Extinguishing small scale fire: dry-powder or carbon dioxide (CO₂) extinguisher, dry sand or extinguishing foam.

5.2 Special hazards arising from the substance or mixture

The vapours are heavier than air, so they amass and spread near the ground, and in case of a random leak may initiate a fire or explosion even far from the source. This danger is imminent especially in places below the ground level or in enclosed spaces. Toxic or irritating smoke containing monoxide, carbon dioxide or unburned hydrocarbons might be produced during burning of the substance.

5.3 Advice for fire-fighters

Minimize the penetration of the extinguishing medium contaminated by the substance into the sewage, surface or underground waters or into the soil. There is a danger of explosion and subsequent fire in case of a leak into the sewage. Use water spray to keep the containers with the substance cool in order to prevent an explosion caused by the heat. Do not use foam and water at the same time because water dissolves the foam.

Protective equipment for fire fighters: full protective gear and contained breathing apparatus.



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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Enclose the affected place and prevent access to the area in danger. Remain on the windward side. There is a danger of fire in case of accidental release of the substance, therefore remove all possible ignition sources, do not smoke and do not manipulate with open fire. If possible, ensure a sufficient ventilation of enclosed spaces. Prevent contact with the substance and its vapours. Use proper personal protective equipment (as indicated in Subsection 8.2) when removing the effects of the emergency event/accident. In case of large scale accidents evacuate people from the whole area in danger. There is a danger of the vapours exploding when ignited in places below the ground or in enclosed places (including sewage).

6.2 Environment precautions

Prevent further leakage and enclose the leaking place. Prevent leakage of the substance into the sewage, surface and underground waters by covering sewage inlets. Inform the relevant authorities if rivers, lakes or sewage systems have been contaminated during the leak.

6.3 Methods and material for containment and cleaning up

Drain the leaked substance safely. There is a danger of fire during a leak; therefore only explosion-proof luminaries and electrical equipment and non-sparking tools must be used. Absorb the remains into an appropriate non-flammable porous/absorbent material (e.g. sand, dirt, siliceous earth, vermiculite) and transport for disposal in sealed containers. Dispose of in accordance with valid legal regulations for waste (see Section 13). Use water spray to reduce the vapour in the air.

For large leaks into water use floating barrage and collect the substance from surface using surface skimmers (separators) or cover the leaked substance with sorbent and remove saturated sorbent from the surface by scraping or draining. Consult a professional before using dispersing agents.

6.4 Reference to other sections

For recommended personal protective equipment see Subsection 8.2 ("Limiting exposure").

For recommended waste disposal see Section 13 ("Disposal considerations").

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

The product is manufactured and must be used during its whole life cycle under strictly controlled conditions defined in Regulation (EC) No.1907/2006 REACH. All these conditions must be strictly observed for safe storage to prevent the possibility of exposure of humans and the environment, with the exception of accidents or extraordinary events.

General safety and hygiene measures: Use only in well-ventilated areas, where there are no sources of ignition, take precautions against possible formation of static electricity. Do not use compressed air for filling, discharging, or other manipulation. Remember that even empty containers may contain residues of flammable vapours, therefore avoid performing activities such as welding, cutting, grinding, etc in their vicinity.

Adherence to good personal hygiene is important. Dispose of contaminated clothing immediately. Do not eat, drink or smoke during work! After work and before eating or drinking wash hands and uncovered body parts with soap and water and apply a suitable skin protection cream. Do not wear contaminated clothing, shoes and protective equipment in eating areas.

7.2 Conditions for safe storage, including any incompatibilities

The product is manufactured and must be used during its whole life cycle under strictly controlled conditions defined in Regulation (EC) No.1907/2006 REACH. All these conditions must be strictly observed for safe storage to prevent the possibility of exposure of humans and the environment, with the exception of accidents or extraordinary events. The storage containers must be sealed and properly labelled and earthed. We recommend a soft or stainless steel as suitable materials for containers. Do not store near incompatible materials, such as e.g. oxidizing agents.



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7.3 Specific end uses

The substance has been registered as transported isolated intermediate product manufactured and used under strictly controlled conditions as defined in Article 18 (4) of Regulation (EC) no. 1907/2006 (REACH) (see Section 16), and therefore it must be treated as such. Guidelines including a proposal how to examine and demonstrate strictly controlled conditions in the workplace are available at: <http://cefic.org/Files/Publications/demonstrating-SCC-Update-June-2010-final.pdf>.

In case of accidental releases the handling and storage areas and methods of handling the substance must meet the requirements for work with flammable substances potentially damaging waters and soil.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Czech Republic (Government Regulation no. 361/2007 Coll.)	PEL [mg.m ⁻³]	NPK-P [mg.m ⁻³]	
Name :see Chapter 1.1	Limit values for the substance itself have not been determine <i>it is recommended to adhere to the limits determined for the elements contained in the substance:</i>		
Index no.: none			
CAS no.: 91723-50-1			
EC no.: 294-557-9			
<i>Elements:</i>	<i>NAME :</i>	<i>PEL [mg.m⁻³]</i>	<i>NPK-P [mg.m⁻³]</i>
	benzene	3	10
	toluene	200	500
	ethylbenzene	200	500
	xylenes	200	400

PEL : permissible exposure limit of the chemical substance in the air

NPK-P : maximum permissible concentration of the chemical substance in the air

European Union (Directive 2000/39/EC)	8-hour limit [mg.m ⁻³]	Short-time limit [mg.m ⁻³]	
Name :see Chapter 1.1	Limit values for the substance itself have not been determined <i>it is recommended to adhere to the limits determined for the elements contained in the substance:</i>		
Index no.: none			
CAS no.: 91723-50-1			
EC no.: 294-557-9			
<i>Elements:</i>	<i>NAME :</i>	<i>8-hour limit [mg.m⁻³]</i>	<i>Short-time limit [mg.m⁻³]</i>
	benzene	3,25	Not determined
	toluene	192	384
	ethylbenzene	442	884
	xylenes	221	442

8-hour limit: measured or calculated in relation to the reference period of eight hours as a time-weighted average

Short time limit: limit value that should not be exceeded during exposure corresponding to 15 minutes

Germany	8-hour limit [mg.m ⁻³]	Short-time limit [mg.m ⁻³]	
Name :see Chapter 1.1	Limit values for the substance itself have not been determine <i>it is recommended to adhere to the limits determined for the elements contained in the substance:</i>		
Index no.: none			
CAS no.: 91723-50-1			
EC no.: 294-557-9			
<i>Elements:</i>	<i>NAME :</i>	<i>8-hour limit [mg.m⁻³]</i>	<i>Short-time limit [mg.m⁻³]</i>
	benzene	3,5	Not determined
	toluene	190	760



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<i>ethylbenzene</i>	440	880
<i>xylenes</i>	440	880

8-hour limit: measured or calculated in relation to the reference period of eight hours as a time-weighted average

Short time limit: limit value that should not be exceeded during exposure corresponding to 15 minutes

Recommended procedure for monitoring concentrations in the work environment: gas chromatography (GC) with flame ionization detector (FID) or mass spectrometric detection (MS), according to the technical standards ČSN EN 689 and ČSN EN 482.

8.2 Exposure controls

Appropriate engineering controls

The product is manufactured and must be used during its whole life cycle under strictly controlled conditions defined in Regulation (EC) No.1907/2006 REACH (see Section 16). Protective measures against exposure must be ensured by strict keeping of the substance under control by technical means and using process and control technologies that reduce emissions and subsequent exposure to prevent the release of vapours of the substance into the open air, the penetration of substances into the aquatic environment and the soil and the potential human exposure. Spaces in which the substance is handled or stored must be equipped with impermeable floors and retaining tanks in case of accidental spills of the substance.

Personal protective equipment

If an accident or extraordinary event causes increased exposure, employees must have access to personal protective measures (PPM) for the protection of airways, eyes, hands and skin, depending on the nature of the performed activities. Suitable protection for airways must also be available where it is not technically possible to ensure the adherence of exposition limits identified for the work environment or ensure that exposure via airways will not affect the health of people. During non-stop use of these measures during permanent work, it is necessary to include safety breaks if the nature of the PPM requires them. All PPM need to be kept in usable condition and damaged or contaminated ones need to be immediately replaced.

RECOMMENDED PERSONAL PROTECTIVE MEASURES (PPM):

- *protection of airways:* for leaks a protective breathing mask with A filter (brown, against organic vapours), isolation breathing device for removing the consequences of extraordinary events
- *protection of eye / face:* protective glasses
- *protection of skin - hands* protective gloves

	<i>Gloves material</i>	<i>Layer thickness</i>	<i>Time of penetration</i>
General work activity (possibility of contamination by staining)	nitril	0,4 mm	10 minutes
cleaning after leaks / emergencies	Viton	0,7 mm	480 minutes

- *protection of other body parts:* antistatic non-flammable protective clothing, antistatic shoes
- *heat danger:* not relevant for the identified manner of use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

PROPERTY	UNIT	VALUE	NOTE
Appearance		yellowish liquid	
Odour		aromatic	

PROPERTY	UNIT	VALUE	NOTE
Odour threshold	[ppm] [ppm] [ppm] [mg.m ⁻³]	<i>research data for elements contained in the substance:</i> 4.68(benzene) 2.14 (toluene) 140 (ethylbenzene) 4.5 (xylenes)	HSDB HSDB HSDB UAKRON
pH value		not relevant	
Melting / freezing point	[°C]	< -100 až -29	
Initial boiling point / boiling range	[°C]	75-95	beginning of distillation ČSN EN ISO 3405
Flash point	[°C]	-16	ČSN 65 6065
Evaporation rate	diethyl ether=1 butyl acetate=1 butyl acetate=1 diethyl ether=1 diethyl ether=1	<i>research data for elements contained in the substance:</i> 2.8 (benzene) 2.24 (toluene) 0.84 (ethylbenzene) 8.8 (ethylbenzene) 13.5 (xylenes)	HSDB UAKRON UAKRON UAKRON UAKRON
Flammability		determining flammability not relevant for liquids	
Upper explosion limit	[% vol]	<i>research data for elements contained in the substance:</i> 7.8 (benzene) 7 (toluene) 6.8 (ethylbenzene) 7.5 (xylenes)	HSDB HSDB HSDB UAKRON
Lower explosion limit	[% vol]	<i>research data for elements contained in the substance:</i> 1.2 (benzene) 1.27 (toluene) 0.8 (ethylbenzene) 1.7 (xylenes)	HSDB HSDB HSDB UAKRON
Vapour pressure	[hPa]	21.33-246.69 2.10-302.7 24.2-550	at 20°C at 25°C at 37.8°C
Vapour density	air=1	UVCB substance gases heavier than air <i>research data for elements contained in the substance:</i> 2.8(benzene) 3.1 (toluene) 3.66 (ethylbenzene) 4.5 (xylenes)	HSDB HSDB HSDB UAKRON
Relative density	water=1	0.850-0.880	ČSN EN ISO 12185
Solubility in water	[g.l ⁻¹]	0.035-0.16	
Partition coefficient: n-octanol/water	[log Kow]	2.2 to >6.5	
Auto-ignition temperature	[°C]	440	ČSN 33 0371



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PROPERTY	UNIT	VALUE	NOTE
Decomposition temperature		does not decompose at usual temperatures of use	
Kinematic viscosity	[mm ² .s ⁻¹]	0.6	at 40°C
Explosive properties		substance does not contain explosive elements	
Oxidising properties		substance does not have oxidising properties	

9.2 Other information
Not required.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions if used as an intermediate product and during storage and handling under strictly controlled conditions.

10.2 Chemical stability

Chemically stable if used as an intermediate product and during storage and handling under strictly controlled conditions at normal temperatures.

10.3 Possibility of hazardous reactions

No hazardous chemical reactions if used as an intermediate product and during storage and handling under strictly controlled conditions.

10.4 Conditions to avoid

Ignition sources (including static electricity), high temperature, sun radiation.

10.5 Incompatible materials

Oxidizers.

10.6 Hazardous decomposition products

May produce carbon monoxide by thermal decomposition at high temperatures, e.g. in a fire.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Substances

HAZARD CLASS	EFFECT ON HEALTH	JUSTIFICATION
Acute toxicity	based on available information there is no need to classify the substance for acute toxic effects on the health of people after inhalation, consumption or skin penetration	Currently there is no information that would show that the substance has the given property
Skin corrosion/irritation	skin irritant <i>irritating</i> <i>unjustified</i> <i>unjustified</i>	data from registration documentation: <i>data available for humans and animals examination of acid or alkaline reserve in vitro study in vivo study</i>

HAZARD CLASS	EFFECT ON HEALTH	JUSTIFICATION
	<i>irritating</i>	
Serious eye damage/irritation	eye irritant <i>irritating</i> <i>unjustified</i> <i>unjustified</i> <i>irritating</i>	data from registration documentation: <i>data available for humans and animals</i> <i>examination of acid or alkaline reserve</i> <i>in vitro study</i> <i>in vivo study</i>
Respiratory or skin sensitiation	based on available data the substance does not cause allergic reaction and therefore it does not need to be classified as sensitizing <i>non-sensitizing</i> <i>non-sensitizing</i>	data from registration documentation: <i>data available for humans and animals</i> <i>in vivo study</i>
Germ cell mutagenicity	causes heritable genetic changes <i>genotoxic</i> <i>genotoxic</i>	data from registration documentation: <i>in vitro study</i> <i>in vivo study</i>
Carcinogenicity	causes cancer	UVCB substance contains ingredients with that effect in an amount exceeding the classification limits
Reproductive toxicity	may have adverse effects on fetal development	UVCB substance contains ingredients with that effect in an amount exceeding the classification limits
Toxicity for specific target organs - single exposure	has a narcotic effect temporarily may cause drowsiness or dizziness	UVCB substance contains ingredients with that effect in an amount exceeding the classification limits
Toxicity for specific target organs - repeated exposure	damages human organs at repeated exposure	UVCB substance contains ingredients with that effect in an amount exceeding the classification limits
Aspiration hazard	if swallowed and enters airways may cause lung damage or death	UVCB substance contains ingredients that when inhaled cause pulmonary edema, and qualifies for classification as hazardous when inhaled - i.e. it is a hydrocarbon with a kinematic viscosity $\leq 20.5 \text{ mm}^2 \cdot \text{s}^{-1}$ at 40°C

11.1.2 Information on likely routes of exposure

If used as an intermediate product and during storage and handling under strictly controlled conditions there is no danger of exposure. A significant route of exposure to inhalation can occur in emergency or disaster situations.

11.1.3 Symptoms and effects (acute, delayed and chronic after short-term and long-term exposure)

Depending on the size of exposure to the substance could cause headaches, nausea, drowsiness, dizziness, respiratory irritation associated with cough or difficulty in breathing up to respiratory arrest, convulsions and coma. If swallowed may cause spontaneous vomiting with a risk of penetration of substances into the lung (aspiration) and lung edema formation (chemical pneumonia), which may cause even death. Direct contact with eyes or skin may cause irritation. After prolonged exposure to the substance on the skin can cause skin degreasing. The substance can trigger heritable genetic changes causing or promoting cancer in humans.

11.1.4 Interactive effects

No interactions at intended use.



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11.1.5 Absence of specific data

According to Article 18 (3) of Regulation (EC) no. 1907/2006 REACH the only information reported on transported isolated intermediates above 1000 t/year is to be in accordance with Annex VII of the Regulation. Tests specified in Annexes VIII to X do not have to be carried out.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

AQUATIC TOXICITY:

Subacute toxicity on invertebrates: EC50, 48 hours: 1.2-2.7 mg.l⁻¹ (*Daphnia*) /WAF/

Study of water plants growth inhibition: NOEC, 96 hours: 0.12 mg.l⁻¹/WAF/

Subacute toxicity on fish: LC50, 96 hours: 1.1-4.4 mg.l⁻¹ /WAF/

The test of inhibition of respiration of activated sludge: IC50, 72 hours, nitrification: 76.7 mg.l⁻¹ (calculated)

12.2 Persistence and degradability

The product is not easily biologically decomposable.

12.3 Bioaccumulation potential

The bioaccumulation of the product is assumed due to the fact that the value of the partition coefficient n-octanol/water (log Kow) is greater than 3.

12.4 Mobility in soil

he calculated log Koc = 1.46 to 4.71 means it is possible to expect a strong sorption of the product on the soil.

12.5 Results of PBT and vPvB assessment

On isolated intermediates under Art. 2 (8) of Regulation (EC) no. 1907/2006 REACH there is no obligation to assess chemical safety and prepare a chemical safety report in accordance with Article. 14 thereof, thus neither an obligation to assess PBT (P- persistent, bioaccumulative B-T-toxic) and vPvB (vP-highly persistent, bioaccumulative vB-high).

12.6 Other adverse effects

The product is within the meaning of Annex 1 of the Water Act no. 254/2001 Coll. considered a hazardous harmful substance.

12.7 Further information

According to Article 18 (3) of Regulation (EC) no. 1907/2006 REACH the only information reported on transported isolated intermediates above 1000 t/year is to be in accordance with Annex VII of the Regulation. Tests specified in Annexes VIII to X do not have to be carried out.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

If used as an intermediate and during storage and handling under strictly controlled conditions there is no waste. In the event waste occurs as the result of an accident or an extraordinary event it is necessary to comply with valid EU and national and local applicable regulations.

13.1.1 Recommended waste classification according to Decree no. 381/2001 Coll. (Waste Catalogue)

Catalogue number for the product that became waste:

07 01 04* Other organic solvents, washing liquids and mother liquors.

16 03 05* Organic wastes containing dangerous substances.

Catalogue number for leaked product sorbed onto absorbent (e.g. Vapex):

15 02 02* Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths and protective clothing contaminated with hazardous substances.



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Catalogue number for soil contaminated by leaked product:

17 05 03* Soil and stones containing dangerous substances.

13.1.2 Recommended way of waste disposal

Hand over the waste for disposal to a professionally qualified and competent person.

Energy recovery (incineration).

In the case of soil contaminated by leaked product of the landfill and biodegradation.

13.1.3 Recommended disposal methods for contaminated packaging

Not relevant. The product is not packaged, it is transported by rail tank cars.

13.1.4 Measures to limit exposure to the waste treatment

Do not flush down the sewer products leaked during an incident or an extraordinary event. Proceed in accordance with the instructions set out in Section 6 ("Measures in the event of accidental release") and subsection 8.2 ("Exposure control") and adhere to all applicable laws for the protection of persons, air and water.

SECTION 14: TRANSPORT INFORMATION

Information on transport classification are in accordance with the following UN Model Regulations:

European Agreement concerning the International Carriage of Dangerous Goods (ADR),

International Carriage of Dangerous Goods by Rail (RID).

14.1 UN number	1993
14.2 UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (CONTAINS BENZENE AND TOLUENE)
14.3 Transport hazard class(es):	3
14.4 Packing group:	II
14.5 Environmental hazards:	the product is hazardous for the environment in accordance with criteria stated in the UN Model Regulations
14.6 Special precautions for user::	none
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	the product is not intended to be carried in bulk in accordance with the International Maritime Organization (IMO) documents
14.8 Additional information	
Hazard identification number:	33
Classification code:	F1
Safety sign:	3 + label for substances endangering the environment (symbol: fish and tree)

SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU regulations

Regulation (EC) No 1907/2006 (REACH) of the European Parliament and of the Council, as amended
REGISTRATION (TITLE II OF REACH REGULATION)

The product was registered as transported isolated intermediate manufactured and used under strictly controlled conditions.

AUTHORIZATION (TITLE VII OF REACH REGULATION)

Isolated intermediates under Art. 2 (8) are not subject to authorization.



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RESTRICTION (TITLE VIII OF REACH REGULATION)

Restrictions are met by establishing permitted usage.

Regulation (EC) No 1272/2008 (CLP) of the European Parliament and of the Council, as amended

The product has been classified in accordance with the Regulation. Obligations related to packing and labelling of hazardous chemicals packaging the product do not apply due to the fact that the marketed product is packaged in a container.

EP and Council Regulation (EC) no. 649/2012 concerning the export and import of dangerous chemicals, as amended

The product is not subject to the special provisions on exports and imports.

EP and Council Directive (EC) no. 2006/12 on waste, as amended

Implemented into Act no. 185/2001 Coll., On waste.

EP and Council Directive (EC) no. 2012/18 / EU on the control of major accident hazards involving dangerous substances, as amended

Implemented by Act no. 224/2015 Coll., On prevention of serious accidents caused by dangerous chemicals or mixtures.

15.1.2 Czech Republic

Act no. 350/2011 Coll. on chemical substances and mixtures, as amended

Act no. 258/2000 Coll. on public health protection, as amended

Act no. 254/2001 Coll., On waters, as amended

Act no. 201/2012 Coll., On air protection, as amended

Act no. 185/2001 Coll., On waste, as amended

Decree no. 381/2001 Coll., Establishing the Waste Catalogue, as amended

Government Regulation no. 361/2007 Coll., Laying down the conditions of health protection at work, as amended

Act no. 224/2015 Coll., on prevention of serious accidents caused by selected dangerous chemical substances or mixtures, as amended

15.2 Chemical Safety Assessment

The isolated intermediates under Art. 2 (8) of Regulation (EC) no. 1907/2006 REACH are under no obligation to assess chemical safety and prepare a chemical safety report in accordance with Article. 14 of the Regulation and therefore a manufacturer did not process a report on chemical safety.

SECTION 16: OTHER INFORMATION

Indication of changes made at revision

26.10.2005: Editing information in chapters 2, 3.1, 3.2, 11.1, 11.2, 12.5, 13, 15.1, 15.2, 16

20.02.2006: Editing information in chapters 3.1, 15.1, 16

01.12.2006: Editing information in chapters 1, 2, 8 and 16

01.03.2007: Editing information in chapters 1 and 16

01.06.2007: General update in connection with Regulation (EC) No.1907 / 2006

01.12.2009: Editing information in chapters 1, 2.1, 8.1, 9, 15, 16 and "Declaration"

01.12.2010: Editing information in chapter 1 ((registration number, used under strictly controlled conditions), 2 (classification and labelling according to CLP), 4, 14, 15, 16 and addition of an Annex

01.08.2011: General editing regarding the update of Annex II to Regulation (EC) no. 1907/2006 REACH in accordance with Annex I of Commission Regulation (EU) no. 453/2010

01.01.2012: Odd. 15.1.2 – legislation update

01.06.2012: Odd. 1.1 – product identifiers, Section 1.3 – contact update and Section 16 – abbreviations

31.05.2015: Section 1 (contact information), Section 2 and Section 16 (text deletion), Section 15.1 (legislation update)



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01.11.2016: Section 1 (contact information), Section 14 and 15 (editing in accordance with Regulation (EC) no. 830/2015), Section 15 (legislation update)

Abbreviations used in the text

CAS number	Registration number assigned to the substance by the "Chemical Abstracts Service" of "American Chemical Society".
EC number	Official number of the chemical substance in the European Union: EINECS (European Inventory of Existing Commercial Substances), or ELINCS (European List of Notified Chemical Substances), or NLP (No longer polymer list).
REACH	EU Regulation no. 1907/2006 on the Registration, Evaluation and Authorisation of Chemicals.
CLP	EU Regulation No 1272/2008 on the Classification, Labeling and Packaging of chemical substances and mixtures, which implements the United Nations' Globally harmonised System into EU legislature.
SDS	Safety Data Sheet.
ECHA	European Chemicals Agency.
UVCB	Substances of Unknown or Variable composition, Complex reaction products or Biological materials.
ČSN EN (ISO)	European norm accepted into the Czech technical norms system.
UN	The United Nations.
IBC	The Intermediate Bulk Container.
MARPOL 73/78	The International Convention for the Prevention of Pollution from Ships of 1978.
WAF	Water accommodated Fiction.
HSDB	Hazardous Substances Data Bank.
UAKRON	The University of Akron.

Sources of data used for setting up the safety sheet

Company records of Unipetrol RPA, s.r.o. on the classification of dangerous properties of products Annexes I, IV, VI and VII to EC Regulation No 1272/2008 CLP, as amended
Principles for provision of first aid following exposure to chemical substances (doc. MUDr. Daniela Pelclová et al.)
Registration documentation for the substance in accordance with EC Regulation No 1907/2006 REACH
Decision of ECHA No SUB-D-2114147706-45-01/F on registration in accordance with EC Regulation No 1907/2006 REACH
Research data sources (Hazardous Substances Data Bank HSDB, Sicherheitstechnische Kenndaten chemischer Stoffe SORBE, MedisAlarm, University of Akron Chemical UAKRON, Gestis sanitary limits)

Full wording of H-phrases and EUH-phrases listed in Sections 2 and/or 3

H 225	Highly flammable liquid and vapour.
H 304	May be fatal if swallowed and enters airways.
H 315	Causes skin irritation.
H 319	Causes serious eye irritation.
H 336	May cause drowsiness or dizziness.
H 340	May cause genetic defects.
H 350	May cause cancer.
H 361d	Suspected of damaging the unborn child.
H 372	Causes damage to organs through prolonged or repeated exposure.
H 411	Toxic to aquatic life with long lasting effects.

Training guidelines

Those who manipulate with the product must be demonstrably informed of its dangerous properties, principles of protecting the environment and health from its harmful effects and principles of first aid (Act No 258/2000, as amended).



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Access to information

According to article 35 of EC Regulation No 1907/2006 Reach, each employer must allow access to information listed in the safety sheet to all workers who use this product or are exposed to its effects during their work, and also to representatives of these workers.

Strictly controlled conditions

Are such technological processes and working conditions ensuring that throughout the life cycle of an intermediate (i.e. from its production to transformation into another substance) its emissions to the environment and subsequent exposure of workers are minimised. For site isolated intermediates such conditions are defined in Art. 18 (4) of Regulation (EC) no. 1907/2006 REACH:

- The substance is rigorously contained by technical means during its whole life cycle,
- The procedural and control technologies are used to reduce emissions and the resulting exposure,
- The substance must be handled only by properly trained and authorized personnel,
- Before opening and entering the technological system during cleaning, maintenance or inspection, activities are performed, such as purging and washing
- in case of accident and where waste is generated, procedural and control technologies are used to minimize emissions and the resulting exposure during purification or cleaning and maintenance procedures,
- procedures for handling the substance are adequately documented and strictly supervised by the operator.

Control and verification of the contents of the safety data sheet

Checking and verifying compliance of this document with the requirements of Regulation (EC) no. 1907/2006 REACH and Regulation (EC) no. 1272/2008 CLP were performed by an independent qualified person - Ing. Oldřich Petira, PhD., an authorized expert in the fields of chemistry and nature protection, with focus on industrial toxicology and chemical safety of environment

Disclaimer: This MSDS has been prepared in accordance with Regulation (EC) no. 1907/2006 REACH. It contains information that is necessary for ensuring safety and health at work and environmental protection. Such information does not substitute the quality specification and cannot be considered as a warranty of suitability and applicability of this product for a specific application. These data correspond to the current state of knowledge and experience and are in line with our current legislation. The consumer is responsible for compliance with applicable local laws.



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EXPOSURE SCENARIOS ACCORDING TO ARTICLE 31. REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (EC) NO.1907 / 2006 (REACH)

Exposure scenarios for isolated intermediates used under strictly controlled conditions are not required.