according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

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

1.1 Product identifier

Trade name : Naphtha

REACH Registration Number : 01-2119474679-18-xxxx

Substance name : Naphtha (petroleum), full range straight run

EC-No. : 265-042-6

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

Use of the : Industrial use, Use as an intermediate

Substance/Mixture

Recommended restrictions

on use

: Use in coatings, Use in cleaning agents

1.3 Details of the supplier of the safety data sheet

Supplier : Borealis AG

Wagramer Strasse 17-19, 1220 Vienna, Austria

Telephone: +43 1 22400 0

E-mail address : sds@borealisgroup.com

1.4 Emergency telephone number

+46 303 87280 / +46 303 771643 Production leader, Cracker (24h)

112 Poison Information Centre, Sweden (24h)

+44 (0) 1235 239 670 (NCEC Carechem 24)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 1 H224: Extremely flammable liquid and vapour.

Skin irritation, Category 2 H315: Causes skin irritation.

Germ cell mutagenicity, Category 1B H340: May cause genetic defects.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Carcinogenicity, Category 1B H350: May cause cancer.

Reproductive toxicity, Category 2 H361: Suspected of damaging fertility or the

unborn child.

Specific target organ toxicity - single exposure, Category 3, Central nervous

system

H336: May cause drowsiness or dizziness.

Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters

airways.

Long-term (chronic) aquatic hazard,

Category 2

H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms









Signal word Danger

Extremely flammable liquid and vapour. Hazard statements H224

> May be fatal if swallowed and enters airways. H304

Causes skin irritation. H315

H336 May cause drowsiness or dizziness.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H411 Toxic to aquatic life with long lasting effects.

Prevention: Precautionary statements

> P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking.

P273 Avoid release to the environment.

Wear protective gloves/ protective clothing/ eye

protection/ face protection/ hearing protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/ doctor.

P331 Do NOT induce vomiting.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Additional Labelling

Contains benzene, n-hexane. Restricted to professional users.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : Naphtha (petroleum), full range straight run

EC-No. : 265-042-6

Chemical nature : Naphtha (petroleum), full-range straight-run; Low boiling point

naphtha; [A complex combination of hydrocarbons produced by distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C 4 through C 11 and boiling in the range of approximately – 20 °C to 220 °C

(-4 °F to 428 °F).]

Components

Chemical name	CAS-No.	Concentration (% w/w)		
	EC-No.			
Substance of unknown or variable composition, complex reaction products or biological material (UVCB):				
Naphtha (petroleum), full-	64741-42-0	<= 100		
range straight-run; Low	265-042-6			
boiling point naphtha				



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Main constituents:		
pentane	109-66-0 203-692-4	>= 0 - < 70
isopentane	78-78-4 201-142-8	>= 0 - < 45
n-hexane	110-54-3 203-777-6	>= 0 - < 40
2-methylpentane	107-83-5 203-523-4	>= 0 - < 15
n-heptane	142-82-5 205-563-8	>= 0 - < 20
toluene	108-88-3 203-625-9	>= 0 - < 5
benzene	71-43-2 200-753-7	>= 0,1 - < 5

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Do not ingest. If swallowed then seek immediate medical

assistance.

If inhaled : Move to fresh air.

Keep patient warm and at rest.

Oxygen or artificial respiration if needed. Seek medical advice immediately.

In case of skin contact : Wash off immediately with soap and plenty of water while

removing all contaminated clothes and shoes.

If symptoms persist, call a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

If easy to do, remove contact lens, if worn.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, call a poison control centre or doctor

immediately.

Rinse mouth with water. Do NOT induce vomiting.

Never give anything by mouth to an unconscious person.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Symptoms of poisoning:

Dizziness Headache Nausea

Shortness of breath

Convulsions Unconsciousness

Inhalation: Headache Nausea Vomiting

Unconsciousness

Skin contact: Redness Irritation

Eye contact: Irritation

Ingestion:

Few or no symptoms expected.

Nausea Diarrhoea

Risks : May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause drowsiness or dizziness.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Symptoms of poisoning may not appear for several hours.

Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry powder

Carbon dioxide (CO2)

Foam Water mist Sand





according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Unsuitable extinguishing

media

: High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

: Vapours may form explosive mixtures with air.

Vapours are heavier than air and may spread along floors.

Flash back possible over considerable distance.

Fire will produce dense black smoke containing hazardous

combustion products (see section 10).

Hazardous combustion

products

: Carbon monoxide Carbon dioxide (CO2) Nitrogen oxides (NOx)

Hydrogen sulphide Sulphur oxides

5.3 Advice for firefighters

Special protective equipment

for firefighters

: Wear self-contained breathing apparatus and protective suit.

Further information : Observe the risk of explosion.

Cool containers/tanks with water spray.

In the event of fire and/or explosion do not breathe fumes. Prevent fire extinguishing water from contaminating surface

water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so.

Avoid and prevent all contact and exposure.

Keep people away from and upwind of spill/leak.

Attempt to stop leakage without personal risk.

Vapours are heavier than air and can cause suffocation by reducing oxygen available for

breathing.

Ensure adequate ventilation, especially in confined areas.

Use personal protective equipment.

See chapter 8.

Remove all sources of ignition.

Do not use sparking tools.

Pay attention to flashback.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

6.2 Environmental precautions

Prevent product from entering environment and drains. If major spillage occurs, contact the proper local authorities.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

Collect mechanically and dispose in suitable container for disposal.

Non-sparking tools should be used.

Remove from surface water (e.g. by skimming or siphoning).

6.4 Reference to other sections

For personal protection see section 8. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid exposure - obtain special instructions before use.

Do not handle until all safety precautions have been read and

understood.

Avoid contact with skin, eyes and clothing.

Avoid inhalation of vapour or mist.

Vapours may form explosive mixtures with air. Use only outdoors or in a well-ventilated area.

The following actions are recommended: Closed systems for

handling, process and storage.

Keep away from food, drink and animal feedingstuffs.

When using do not eat, drink or smoke.

Wash hands before breaks and immediately after handling the

product.

Take off contaminated clothing and wash before reuse.

Advice on protection against

fire and explosion

: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. All equipment shall be grounded. No sparking tools should be

used. Use explosion-proof equipment.

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice for diagnostics. Avoid and prevent all spillage, contact

and exposure.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage : Keep containers tightly closed in a cool, well-ventilated place.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

areas and containers Keep locked up or in an area accessible only to qualified or

authorised persons. Protect from sunlight. Suitable materials

for containers: Mild steel Stainless steel

Further information on storage conditions

: Keep away from sources of ignition - No smoking.

Advice on common storage : Incompatible with oxidizing agents

Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Specific use(s) : For professional users only.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis	
pentane	109-66-0	TWA	1.000 ppm	2006/15/EC	
pentane	109-00-0	IVVA		2000/13/EC	
			3.000 mg/m3		
Further information	Indicative		,		
		NGV	600 ppm	SE AFS	
			1.800 mg/m3		
		KGV	750 ppm	SE AFS	
			2.000 mg/m3		
		NGV	600 ppm	SE AFS	
			1.800 mg/m3		
Further information	Indicative short term limit value shall be used as a recommended maximum				
	value and should not be exceeded				
		KGV	750 ppm	SE AFS	
			2.000 mg/m3		
Further information	Indicative short term limit value shall be used as a recommended maximum value and should not be exceeded				
	value and sh				
		TWA	1.000 ppm	2006/15/EC	
			3.000 mg/m3		
Further information	Indicative				
isopentane	78-78-4	TWA	1.000 ppm	2006/15/EC	
•			3.000 mg/m3		
Further information	Indicative		-		
		NGV	600 ppm	SE AFS	
			1.800 mg/m3		
Further information	Indicative ch	ort torm limit value ch	all be used as a recomme	anded maximum	



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

	value and sho	ould not be exceeded	l	
		KGV	750 ppm 2.000 mg/m3	SE AFS
Further information		ort term limit value should not be exceeded	all be used as a recommend	ed maximum
n-hexane	110-54-3	TWA	20 ppm 72 mg/m3	2006/15/EC
Further information	Indicative	•		
		NGV	20 ppm 72 mg/m3	SE AFS
		KGV	50 ppm 180 mg/m3	SE AFS
2-methylpentane	107-83-5	NGV	200 ppm 700 mg/m3	SE AFS
Further information		ort term limit value should not be exceeded	all be used as a recommend	ed maximum
		KGV	300 ppm 1.100 mg/m3	SE AFS
Further information		ort term limit value should not be exceeded	all be used as a recommend	ed maximum
n-heptane	142-82-5	TWA	500 ppm 2.085 mg/m3	2000/39/EC
Further information	Indicative			
		NGV	200 ppm 800 mg/m3	SE AFS
		KGV	300 ppm 1.200 mg/m3	SE AFS
Further information		ort term limit value should not be exceeded	all be used as a recommend	ed maximum
toluene	108-88-3	TWA	50 ppm 192 mg/m3	2006/15/EC
Further information	Indicative, Ide	entifies the possibility	of significant uptake through	the skin
		STEL	100 ppm 384 mg/m3	2006/15/EC
Further information	Indicative, Ide		of significant uptake through	
		NGV	50 ppm 192 mg/m3	SE AFS
Further information	exposure limi	t and simultaneous e use hearing damage	stances close to the existing exposure to noise close to the condition, Substance can be easily al	input value of
		KGV	100 ppm 384 mg/m3	SE AFS
Further information	exposure limi	t and simultaneous e	stances close to the existing exposure to noise close to the ., Substance can be easily al	input value of

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according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

	through the skin.			
benzene	71-43-2	TWA	1 ppm 3,25 mg/m3	2004/37/EC
Further information	Substantial contribution to the total burden via dermal exposure possible, Skin, Carcinogens or mutagens			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Naphtha	Workers	Inhalation	Acute systemic effects	1300 mg/m3
	Workers	Inhalation	Long-term local effects	840 mg/m3
	Workers	Inhalation	Acute local effects	1100 mg/m3
	Consumers	Inhalation	Acute systemic effects	1200 mg/m3
	Consumers	Inhalation	Long-term local effects	180 mg/m3
	Consumers		Acute local effects	640 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name		Environmental Compartment	Value
Naphtha			
Remarks:	composition appropriate for such s	e is a hydrocarbon with a complex, unknown or on (UVCB)., Conventional methods of deriving te and it is not possible to identify a single repre ubstances., The Hydrocarbon Block Method ha environmental exposure with the Petrorisk mod	PNECs are not esentative PNEC as been used to

8.2 Exposure controls

Engineering measures

The following actions are recommended: Closed systems for handling, process and storage.

Use personal protective equipment.

Avoid inhalation of vapour or mist.

Provide adequate ventilation.

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Face-shield (EN 166)

Hand protection

Material : PVA
Break through time : > 480 min

Material : Nitrile rubber
Break through time : > 480 min



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Remarks : Wear suitable gloves.

The selected protective gloves have to satisfy the

specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical

strain, duration of contact).

Skin and body protection : Wear suitable protective clothing and rubber boots.

Respiratory protection : In case of insufficient ventilation: Respirator with AX filter or

self-contained breathing apparatus.

(EN 371/EN 14387:2004)

Environmental exposure controls

General advice : Prevent product from entering environment and drains. If

major spillage occurs, contact the proper local authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid (20 °C, 101,3 kPa)

Colour : clear

Odour : No data available

Odour Threshold : No data available

Melting point : Not applicable

Boiling range : -20 - 180 °C

Flammability : Extremely flammable.

Flash point : < 0 °C

Decomposition temperature : No data available

pH : No data available

Viscosity

Viscosity, dynamic : < 7 Pa.s

Solubility(ies)



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Water solubility : < 0.1 g/l

Solubility in other solvents : Not applicable

Partition coefficient: n-

octanol/water

: Not applicable

Vapour pressure : 2 - 240 kPa

Relative density : 0,63 - 0,75

Density : 686 g/cm³

Bulk density : No data available

9.2 Other information

Explosives : Not explosive

Oxidizing properties : Not applicable

Self-ignition : 280 - 470 °C

Evaporation rate : No data available

Molecular weight : Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Keep away from open flames, hot surfaces and sources of

ignition.

10.5 Incompatible materials



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

Under fire conditions: Carbon monoxide Carbon dioxide (CO2) Nitrogen oxides (NOx) Sulphur oxides Hydrogen sulphide

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

Product:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Method: OECD Test Guideline 401 Remarks: Read-across (Analogy)

Acute inhalation toxicity : LC50 (Rat): > 5,61 mg/l

Test atmosphere: vapour

Method: OECD Test Guideline 403 Remarks: Read-across (Analogy)

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

Method: OECD Test Guideline 402 Remarks: Read-across (Analogy)

Skin corrosion/irritation

Causes skin irritation.

Product:

Species: Rabbit

Assessment: Irritating to skin.
Method: OECD Test Guideline 404

Read-across (Analogy)

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Species: Rabbit

Assessment: No eye irritation Method: OECD Test Guideline 405

Read-across (Analogy)

Respiratory or skin sensitisation

Skin sensitisation: Based on available data, the classification criteria are not met. Respiratory sensitisation: Based on available data, the classification criteria are not met.

Product:

Test Type: Buehler Test Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

Read-across (Analogy)

Germ cell mutagenicity

May cause genetic defects.

Product:

Genotoxicity in vitro : Test Type: in vitro assay

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Remarks: Read-across (Analogy)

: Test Type: In vitro gene mutation study in mammalian cells

Method: OECD Test Guideline 476

Result: negative

Remarks: Read-across (Analogy)

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Rat

Method: OECD Test Guideline 474

Result: negative

Test Type: in vivo assay

Species: Rat

Method: OECD Test Guideline 475

Result: negative

Components:



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

benzene:

Genotoxicity in vitro : Test Type: Ames test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

: Test Type: Chromosome aberration test in vitro

Metabolic activation: with and without metabolic activation

Result: positive

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse

Application Route: inhalation (vapour) Method: OECD Test Guideline 474

Result: positive

Species: Human

Result: Positive results were obtained in some in vivo tests.

Carcinogenicity

May cause cancer.

Product:

Species: Mouse

Application Route: Dermal NOAEL: NOEL: 0,5 ml

Method: OECD Test Guideline 451 Remarks: Read-across (Analogy)

Species: Rat

Application Route: Inhalation NOAEL: NOEL: 292 ppm

Method: OECD Test Guideline 453 Remarks: Read-across (Analogy)

Components:

benzene:

Species: Rat, (male and female)

Application Route: Oral Exposure time: 103 wks Dose: 25 mg/kg bw/d

Frequency of Treatment: 1/d, 5 d/wk Method: OECD Test Guideline 453

Species: Mouse, (male and female) Application Route: Inhalation Exposure time: 2 - 16 wks



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Dose: 960 mg/m3

Frequency of Treatment: 6 h/d, 5 d/wk

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Product:

Effects on fertility : Species: Rat

General Toxicity - Parent: No observed adverse effect level: >

24.700 mg/m³

General Toxicity F1: No observed adverse effect level: >

24.700 mg/m³

Method: OECD Test Guideline 421

Effects on foetal : General Toxicity Maternal: NOAEL: 23.900 mg/m³ development : Developmental Toxicity: NOAEL: 23.900 mg/m³

Method: OECD Test Guideline 414

Teratogenicity: NOAEL: > 20.000 mg/m³

Developmental Toxicity: NOAEL: > 20.000 mg/m³

Method: OECD Test Guideline 416

STOT - single exposure

May cause drowsiness or dizziness.

Product:

Exposure routes: Inhalation

Remarks: May cause drowsiness or dizziness.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Product:

Species: Rat NOAEL: 20 mg/l

Application Route: inhalation (vapour)

Exposure time: 90 d

Method: EPA OPPTS 870.3465 Remarks: Systemic effects Read-across (Analogy)

Species: Rat NOAEL: 9,84 mg/l

Application Route: inhalation (vapour) Method: OECD Test Guideline 412 Remarks: Read-across (Analogy)



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Species: Rat NOAEL: 1402 mg/l

Application Route: inhalation (vapour) Method: OECD Test Guideline 453 Remarks: Read-across (Analogy)

Species: Rat

NOAEL: 3750 mg/kg Application Route: Dermal

Method: OECD Test Guideline 410 Remarks: Read-across (Analogy)

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

Further information

Product:

Remarks: Components of the product may be absorbed into the body by inhalation and through the skin.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l

Exposure time: 96 h



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Method: OECD Test Guideline 203 Remarks: Read-across (Analogy)

LL50 (fathead minnow (Pimephales promelas)): 8,2 mg/l

Exposure time: 96 h Method: EPA 66013-75-009 Remarks: Read-across (Analogy)

Toxicity to daphnia and other

aquatic invertebrates

: EL50 (Daphnia magna (Water flea)): 4,5 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 Remarks: Read-across (Analogy)

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): 3,1

mg/l

End point: Growth rate Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Read-across (Analogy)

NOELR (Pseudokirchneriella subcapitata (green algae)): 0,5

mg/l

End point: Growth rate Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Read-across (Analogy)

EL50 (Pseudokirchneriella subcapitata (microalgae)): 3,7 mg/l

End point: Growth rate Exposure time: 96 h

Method: OECD Test Guideline 201 Remarks: Read-across (Analogy)

Toxicity to fish (Chronic

toxicity)

: Remarks: No data available

Toxicity to daphnia and other

aquatic invertebrates (Chronic toxicity)

: NOELR: 2,6 mg/l Exposure time: 21 d

> Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Read-across (Analogy) toxic effects for reproduction

Toxicity to bacteria : EC50 (Tetrahymena pyriformis): 15,41 mg/l

Exposure time: 40 h

Test Type: Growth inhibition

Method: QSAR



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Ecotoxicology Assessment

Long-term (chronic) aquatic

hazard

: Toxic to aquatic life with long lasting effects.

Components:

benzene:

Toxicity to fish (Chronic : LOEC: 1.6 ma/l toxicity)

Exposure time: 32 d

Species: Pimephales promelas (fathead minnow)

Test Type: flow-through test

Toxicity to daphnia and other

aquatic invertebrates

Exposure time: 7 d

(Chronic toxicity) Species: Ceriodaphnia dubia (water flea)

: NOEC: 3 mg/l

Test Type: semi-static test

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Not applicable

Substance is complex UVCB.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Not applicable

Substance is complex UVCB.

12.4 Mobility in soil

Product:

Mobility : Remarks: Not applicable

Components:

n-heptane:

Mobility : Remarks: After release, disperses into the air.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher...



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological

information

: Prone to photochemical degradation, reacting with OH

radicals and ozone.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of as hazardous waste in compliance with local and

national regulations.

List of suggested waste codes/waste designations in

accordance with the EWC:

13 07 02 (petrol)

13 07 03 (other fuels (including mixtures))

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 1268 **IMDG** : UN 1268

14.2 UN proper shipping name

ADR : PETROLEUM PRODUCTS, N.O.S.

(Naphtha, petroleum, full-range straight-run)



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

IMDG : PETROLEUM PRODUCTS, N.O.S.

(Naphtha, petroleum, full-range straight-run)

14.3 Transport hazard class(es)

ADR : 3 **IMDG** : 3

14.4 Packing group

ADR

Packing group : I
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : (D/E)

IMDG

Packing group : I Labels : 3 EmS Code : F-E, S-E

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

Remarks : SDS: No specific instructions needed.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on : Conditions of restriction for the



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

following entries should be considered:

Number on list 3

Quantity 1

Quantity 2

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of

major-accident hazards involving dangerous substances. Category

34 Petroleum products: (a)

Petroleum products: (a) 2.500 t 25.000 t gasolines and naphthas,

(b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels,

home heating oils and gas oil blending streams),(d)

heavy fuel oils

Other regulations:

Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

EUH066 : Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first

list of indicative occupational exposure limit values

2004/37/EC : Europe. Directive 2004/37/EC on the protection of workers

from the risks related to exposure to carcinogens or mutagens

at work

2006/15/EC : Europe. Indicative occupational exposure limit values

SE AFS : Sweden. Occupational Exposure Limit Values

2000/39/EC / TWA : Limit Value - eight hours
2004/37/EC / TWA : Long term exposure limit
2006/15/EC / TWA : Limit Value - eight hours
2006/15/EC / STEL : Short term exposure limit
SE AFS / NGV : Time Weighted Average
SE AFS / KGV : Short Term Exposure Limit



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Further information

Issuer Borealis, Group Product Stewardship / Mikaela Eriksson.

Sources of key data used to compile the Safety Data

Chemical Safety Report, Naphthas (petroleum), full-range straight-run, CONCAWE REACH Consortium, 2020

Sheet

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Annex

Exposure Scenario

Number	Title
ES1	Use at industrial sites, Use as an intermediate



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

ES1: Use as an intermediate

1.1. Title section

Structured Short Title : Use at industrial sites

Environ	Environment				
CS1	Environment	ERC6a			
Worker					
CS2	General measures (flammability), General measures (aspiration), General measures (skin irritants), General measures (carcinogens), General measures applicable to all activities	PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC15, PROC28			
CS3	General exposures (closed systems)	PROC1			
CS4	General exposures (closed systems)	PROC2			
CS5	General exposures, Batch process, Closed systems	PROC3			
CS6	Laboratory activities	PROC15			
CS7	Bulk transfers, Closed systems, Loading and unloading	PROC8b			
CS8	Equipment cleaning and maintenance	PROC8a, PROC28			
CS9	Storage	PROC1			
CS10	Storage	PROC2			

1.2. Conditions of use affecting exposure

1.2.1. Control of environmental exposure: Use of intermediate (ERC6a)

Amount used, frequency and	duration of	use (or from service life)
Annual amount per site	:	15000 t



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Daily amount per site : 50000 kg

Maximum allowable site tonnage : 68.000 kg

(MSafe)

Emission days : 300

Technical and organisational conditions and measures

Treat air emission to provide a typical removal efficiency of (%):

Air - minimum efficiency of 80 %

Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%):

Water - minimum efficiency of 94,2 %

Risk from environmental exposure is driven by freshwater sediment.

Prevent discharge of undissolved substance to or recover from onsite wastewater.

If discharging to domestic sewage treatment plant, no on-site wastewater treatment required.

Do not apply industrial sludge to natural soils.

Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to sewage treatment plant

STP type : Municipal Sewage Treatment Plant

STP effluent : 2.000 m³/d

Not applicable as there is no release to wastewater.

Estimated substance removal from wastewater via domestic sewage treatment:

Water - minimum efficiency of 95,7 %

Other conditions affecting environmental exposure

Local freshwater dilution factor : 10

Local marine water dilution factor : 100

1.2.2. Control of worker exposure: General measures (flammability), General measures (aspiration), General measures (skin irritants), General measures (carcinogens), General measures applicable to all activities

Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1) / Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2) / Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) / Transfer of substance or mixture (charging/discharging) at non dedicated-



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

facilities (PROC8a) / Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b) / Use as laboratory reagent (PROC15) / Manual maintenance (cleaning and repair) of machinery (PROC28)

Product (article) characteristics

Covers concentrations up to 100 %

Physical form of product : Liquid

Vapour pressure : Liquid, vapour pressure > 10 kPa at Standard Temperature

and Pressure

Amount used, frequency and duration of use (or from service life)

Use frequency : Covers use up to 8 hours/day

Technical and organisational conditions and measures

Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Occupational Health and Safety Management System: Advanced

Conditions and measures related to personal protection, hygiene and health evaluation

General measures (flammability)

Use in contained systems

Keep away from sources of ignition - No smoking.

Use only in well-ventilated areas.

To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.

No sparking tools should be used.

General measures (aspiration)

Do not ingest. If swallowed then seek immediate medical assistance.

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Use suitable eye protection and gloves.

General measures (carcinogens)

Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment. Clean/flush equipment, where possible, prior to maintenance. Where there is potential for exposure: restrict access to authorised persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when its use

is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely.

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according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance.

Other conditions affecting workers exposure

Assumes a good basic standard of occupational hygiene is implemented

1.2.3. Control of worker exposure: General exposures (closed systems) Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Technical and organisational conditions and measures

Handle substance within a closed system.

Sample via a closed loop or other system to avoid exposure.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Other conditions affecting workers exposure

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

1.2.4. Control of worker exposure: General exposures (closed systems) Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Technical and organisational conditions and measures

Handle substance within a closed system.

Sample via a closed loop or other system to avoid exposure.

Local exhaust ventilation

Inhalation - minimum efficiency of 90 %

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Other conditions affecting workers exposure



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

1.2.5. Control of worker exposure: General exposures, Batch process, Closed systems Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Technical and organisational conditions and measures

Local exhaust ventilation

Inhalation - minimum efficiency of 90 %

Handle substance within a closed system.

Sample via a closed loop or other system to avoid exposure.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Other conditions affecting workers exposure

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

1.2.6. Control of worker exposure: Laboratory activities Use as laboratory reagent (PROC15)

Technical and organisational conditions and measures

Local exhaust ventilation

Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. Inhalation - minimum efficiency of 99 %

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Other conditions affecting workers exposure

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

BOREALIS

according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply

Put lids on containers immediately after use.

1.2.7. Control of worker exposure: Bulk transfers, Closed systems, Loading and unloading Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Technical and organisational conditions and measures

Local exhaust ventilation

Inhalation - minimum efficiency of 95 %

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Other conditions affecting workers exposure

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

1.2.8. Control of worker exposure: Equipment cleaning and maintenance Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a) / Manual maintenance (cleaning and repair) of machinery (PROC28)

Amount used, frequency and duration of use (or from service life)

Use frequency : Covers use up to 4 hours/day

Technical and organisational conditions and measures

Local exhaust ventilation

Inhalation - minimum efficiency of 90 %

Drain down and flush system prior to equipment break-in or maintenance.

Inhalation - minimum efficiency of 90 %

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Wear suitable coveralls to prevent exposure to the skin.

Wear suitable respiratory protection.



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Efficiency: APF 10

Inhalation - minimum efficiency of 90 %

Other conditions affecting workers exposure

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply

Clear spills immediately.

1.2.9. Control of worker exposure: Storage

Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Technical and organisational conditions and measures

Store substance within a closed system.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %

Other conditions affecting workers exposure

Indoor or outdoor use : Indoor use

Temperature : Assumes process temperature up to 20 °C

1.2.10. Control of worker exposure: Storage

Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Technical and organisational conditions and measures

Local exhaust ventilation

Inhalation - minimum efficiency of 90 %

Store substance within a closed system.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Dermal - minimum efficiency of 90 %



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

Other conditions affecting workers exposure				
Indoor or outdoor use	: Indoor use			
Temperature	: Assumes process temperature up to 20 °C			

1.3. Exposure estimation and reference to its source

1.3.1. Environmental release and exposure: Use of intermediate (ERC6a)

Compartment	Exposure level	RCR
Air	0,068 mg/m³ (Petrorisk)	
Freshwater	0,22 mg/L (Petrorisk)	0,55
Marine water	0,022 mg/L (Petrorisk)	0,055
Freshwater sediment	0,78 mg/kg wet weight (Petrorisk)	0,74
Marine sediment	0,078 mg/kg wet weight (Petrorisk)	0,074
Agricultural soil	0,00027 mg/kg wet weight (Petrorisk)	< 0,001
Top predator's prey (marine water)	0,033 mg/kg wet weight (Petrorisk)	< 0,004

Additional information on exposure estimation

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

1.3.3. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,00163 mg/m³ (ECETOC TRA worker v3)	< 0,01	Benzene
inhalative	systemic	short-term	0,167 mg/m³ (ECETOC TRA worker v3)	< 0,01	



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

inhalative	systemic	short-term	0,00651 mg/m³ (ECETOC TRA worker v3)	< 0,01	Benzene
inhalative	local	long-term	0,042 mg/m³ (ECETOC TRA worker v3)	< 0,01	
inhalative	local	short-term	0,167 mg/m³ (ECETOC TRA worker v3)	< 0,01	
dermal	systemic	long-term	0,00017 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,000992 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,0000496 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,000992 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	short-term	0,0000496 mg/cm2 (ECETOC TRA worker v3)		Benzene
combined routes	systemic	short-term		< 0,01	

1.3.4. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,407 mg/m³ (ECETOC TRA worker v3)	0,212	Benzene
inhalative	systemic	short-term	41,67 mg/m³ (ECETOC TRA worker v3)	0,032	
inhalative	systemic	short-term	1,627 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	10,42 mg/m³	0,012	



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according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

			(ECETOC TRA worker v3)		
inhalative	local	short-term	41,67 mg/m³ (ECETOC TRA worker v3)	0,039	
dermal	systemic	long-term	0,00685 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,02 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,000999 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,02 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	short-term	0,000999 mg/cm2 (ECETOC TRA worker v3)		Benzene
combined routes				0,032	

1.3.5. Worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,814 mg/m³ (ECETOC TRA worker v3)	0,424	Benzene
inhalative	systemic	short-term	83,33 mg/m³ (ECETOC TRA worker v3)	0,065	
inhalative	systemic	short-term	3,255 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	20,83 mg/m³ (ECETOC TRA worker v3)	0,025	
inhalative	local	short-term	83,33 mg/m³	0,078	



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

			(ECETOC TRA worker v3)		
dermal	systemic	long-term	0,00345 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,02 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,00101 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,02 mg/m³ (ECETOC TRA worker v3)		
dermal	local	short-term	0,00101 mg/cm2 (ECETOC TRA worker v3)		Benzene
combined routes	systemic	short-term		0,065	

1.3.6. Worker exposure: Use as laboratory reagent (PROC15)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,814 mg/m³ (ECETOC TRA worker v3)	0,424	Benzene
inhalative	systemic	short-term	83,33 mg/m³ (ECETOC TRA worker v3)	0,065	
inhalative	systemic	short-term	3,255 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	20,83 mg/m³ (ECETOC TRA worker v3)	0,025	
inhalative	local	short-term	83,33 mg/m³ (ECETOC TRA worker v3)	0,078	
dermal	systemic	long-term	0,0017 mg/kg bw/day (ECETOC TRA worker v3)		Benzene



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according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

dermal	local	long-term	0,00992 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,000496 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,00992 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	short-term	0,000496 mg/cm2 (ECETOC TRA worker v3)		Benzene
combined routes	systemic	short-term		0,065	

1.3.7. Worker exposure: Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	1,22 mg/m³ (ECETOC TRA worker v3)	0,636	Benzene
inhalative	systemic	short-term	125 mg/m³ (ECETOC TRA worker v3)	0,097	
inhalative	systemic	short-term	4,882 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	31,25 mg/m³ (ECETOC TRA worker v3)	0,037	
inhalative	local	short-term	125 mg/m³ (ECETOC TRA worker v3)	0,117	
dermal	systemic	long-term	0,069 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,1 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,005 mg/cm2		Benzene

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according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

			(ECETOC TRA worker v3)		
dermal	local	short-term	0,1 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	short-term	0,005 mg/cm2		Benzene
combined routes	systemic	short-term		0,097	

1.3.8. Worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a) / Manual maintenance (cleaning and repair) of machinery (PROC28)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,244 mg/m³ (ECETOC TRA worker v3)	0,127	Benzene
inhalative	systemic	short-term	41,67 mg/m³ (ECETOC TRA worker v3)	0,032	
inhalative	systemic	short-term	1,627 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	6,25 mg/m³ (ECETOC TRA worker v3)	< 0,01	
inhalative	local	short-term	41,67 mg/m³ (ECETOC TRA worker v3)	0,039	
dermal	systemic	long-term	0,041 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,06 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,003 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,06 mg/cm2 (ECETOC TRA worker v3)		

BOREALIS

according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

dermal	local	short-term	0,003 mg/cm2 (ECETOC TRA worker v3)		Benzene
combined routes	systemic	short-term	(ECETOC TRA worker v3)	0,032	

1.3.9. Worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,00163 mg/m³ (ECETOC TRA worker v3)	< 0,01	Benzene
inhalative	systemic	short-term	0,167 mg/m³ (ECETOC TRA worker v3)	< 0,01	
inhalative	systemic	short-term	0,00651 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	0,042 mg/m³ (ECETOC TRA worker v3)	< 0,01	
inhalative	local	short-term	0,167 mg/m³ (ECETOC TRA worker v3)	< 0,01	
dermal	systemic	long-term	0,00017 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,000992 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,0000496 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,000992 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	short-term	0,0000496 mg/cm2 (ECETOC TRA worker v3)		

BOREALIS

according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

combined routes systemic short-term < 0,01
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1.3.10. Worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Exposure route	Health effect	Exposure indicator	Exposure level	RCR	Remarks
inhalative	systemic	long-term	0,407 mg/m³ (ECETOC TRA worker v3)	0,212	Benzene
inhalative	systemic	short-term	41,67 mg/m³ (ECETOC TRA worker v3)	0,032	
inhalative	systemic	short-term	1,627 mg/m³ (ECETOC TRA worker v3)		Benzene
inhalative	local	long-term	10,42 mg/m³ (ECETOC TRA worker v3)	0,012	
inhalative	local	short-term	41,67 mg/m³ (ECETOC TRA worker v3)	0,039	
dermal	systemic	long-term	0,00685 mg/kg bw/day (ECETOC TRA worker v3)		Benzene
dermal	local	long-term	0,02 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	long-term	0,000999 mg/cm2 (ECETOC TRA worker v3)		Benzene
dermal	local	short-term	0,02 mg/cm2 (ECETOC TRA worker v3)		
dermal	local	short-term	0,000999 mg/cm2 (ECETOC TRA worker v3)		
combined routes	systemic	short-term		0,032	



according to Regulation (EC) No. 1907/2006

Naphtha

Version 7.0 Revision Date: 13.09.2021 Former date: 03.08.2021

1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

Health

Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.

Available hazard data do not support the need for a DNEL to be established for other health effects.

Risk management measures are based on qualitative risk characterisation.

