Alkanes Mix 1 (6C) standard solution

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

1.1. Product identifier

Alkanes Mix 1 (6C) standard solution

UFI: VQPY-YWC8-CR47-JU1T

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

Use of the substance/mixture

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Details of the supplier of the safety data sheet

Company name:	AnalytiChem Services, Unipessoal, Lda
Street:	Rua de Júlio Dinis 676 7º
Place:	N-4050-320 Porto
Telephone:	+351 226002917
E-mail:	info@analytichem.com
Contact person:	SDS service department
E-mail:	SDS@analytichem.com
Internet:	www.analytichem.com
Responsible Department:	SDS service department

Supplier or manufacturer details

Company name:	AnalytiChem Belgium NV
Street:	Industriezone "De Arend" 2
Place:	B-8210 Zedelgem
Telephone:	+32 50 28 83 20
E-mail:	info.be@analytichem.com
Contact person:	SDS service department
E-mail:	SDS@analytichem.com
Responsible Department:	AnalytiChem: EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20 EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200 EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848 UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500 USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378 Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701 Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

1.4. Emergency telephone number:

+44 20 3807 3798 (CHEMTREC)

Further Information

inapplicable, this product is a mixture REACH registration number see section 3

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 2; H225
Repr. 2; H361f
Skin Irrit. 2; H315
STOT SE 3; H336
STOT RE 1; H372
Asp. Tox. 1; H304
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

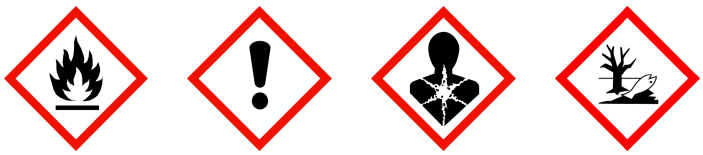
Regulation (EC) No 1272/2008

Hazard components for labelling

pentane
isopentane
2,2-dimethylbutane
2-methylpentane
n-hexane
heptane

Signal word: Danger

Pictograms:



Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe mist/vapours/spray.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P403+P235	Store in a well-ventilated place. Keep cool.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
109-66-0	pentane			25 - < 30 %
	203-692-4	601-006-00-1	01-2119459286-30	
	Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411 EUH066			
78-78-4	isopentane			15 - < 20 %
	201-142-8	601-006-00-1	01-2119475602-38	
	Flam. Liq. 1, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H224 H336 H304 H411 EUH066			
75-83-2	2,2-dimethylbutane			15 - < 20 %
	200-906-8	601-007-00-7		
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
107-83-5	2-methylpentane			15 - < 20 %
	203-523-4	601-007-00-7		
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411			
110-54-3	n-hexane			15 - < 20 %
	203-777-6	601-037-00-0	01-2119480412-44	
	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 1, Asp. Tox. 1, Aquatic Chronic 2; H225 H361f H315 H336 H372 H304 H411			
142-82-5	heptane			10 - < 15 %
	205-563-8	601-008-00-2	01-2119457603-38	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
109-66-0	203-692-4	pentane	25 - < 30 %
	inhalation: LC50 = > 25,3 mg/l (vapours); oral: LD50 = > 5000 mg/kg		
78-78-4	201-142-8	isopentane	15 - < 20 %
	inhalation: LC50 = > 25,3 mg/l (vapours); oral: LD50 = > 2000 mg/kg		
110-54-3	203-777-6	n-hexane	15 - < 20 %
	inhalation: LC50 = 73860 mg/l (vapours); dermal: LD50 = > 2000 mg/kg		
142-82-5	205-563-8	heptane	10 - < 15 %
	inhalation: LC50 = > 29,29 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		

Further Information

No data available

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider

Remove person to fresh air and keep comfortable for breathing.

After inhalation

Provide fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Protect uninjured eye.

After ingestion

Observe risk of aspiration if vomiting occurs.
Call a physician immediately.

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

No data available

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Combustible liquids
Hazardous combustion products
In case of fire may be liberated: Carbon dioxide (CO2) Carbon monoxide
Vapours are heavier than air, spread along floors and form explosive mixtures with air.
Heating causes rise in pressure with risk of bursting.
Beware of reignition.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe vapour/aerosol. Vapours can form explosive mixtures with air.

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Consult an expert
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.
Danger of explosion

6.3. Methods and material for containment and cleaning up

For containment

Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Keep container tightly closed.
Use personal protection equipment. Use extractor hood (laboratory).
Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

Advice on protection against fire and explosion

Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.
The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a

shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Take national regulations into account.

Further information on storage conditions

Keep container tightly closed.

Keep cool. Protect from sunlight.

storage temperature: 2°C - 15°C

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
78-78-4	Isopentane	600	1800		TWA (8 h)	WEL
110-54-3	n-Hexane	20	72		TWA (8 h)	WEL
109-66-0	Pentane	600	1800		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
109-66-0	pentane			
Worker DNEL, long-term		inhalation	systemic	3000 mg/m³
Worker DNEL, long-term		dermal	systemic	432 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	643 mg/m³
Consumer DNEL, long-term		dermal	systemic	214 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	214 mg/kg bw/day
78-78-4	isopentane			
Worker DNEL, long-term		inhalation	systemic	3000 mg/m³
Worker DNEL, long-term		dermal	systemic	432 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	643 mg/m³
Consumer DNEL, long-term		dermal	systemic	214 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	214 mg/kg bw/day
110-54-3	n-hexane			
Worker DNEL, long-term		inhalation	systemic	75 mg/m³
Worker DNEL, long-term		dermal	systemic	11 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	16 mg/m³
Consumer DNEL, long-term		dermal	systemic	5,3 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	4 mg/kg bw/day
142-82-5	heptane			
Worker DNEL, long-term		inhalation	systemic	2085 mg/m³
Worker DNEL, long-term		dermal	systemic	300 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	447 mg/m³
Consumer DNEL, long-term		dermal	systemic	149 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	149 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
109-66-0	pentane
Freshwater	0,23 mg/l
Freshwater (intermittent releases)	0,88 mg/l
Marine water	0,23 mg/l
Freshwater sediment	1,2 mg/kg
Marine sediment	1,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,6 mg/l
Soil	0,55 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles
Face protection umbrella

Hand protection

Tested protective gloves must be worn The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Skin protection

Take off immediately all contaminated clothing and wash it before reuse.
Wear fire resistant or flame retardant clothing.
Wash hands and face before breaks and after work and take a shower if necessary.
Draw up and observe skin protection programme.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.
Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.
Danger of explosion

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	clear	
Odour:	characteristic	
Odour threshold:	No data available	
Melting point/freezing point:		-98 °C
Boiling point or initial boiling point and boiling range:		65 °C
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		11 °C
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Viscosity / kinematic:		No data available
Water solubility:		No data available

Solubility in other solvents

No data available

Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	0,79 g/cm³
Relative density:	No data available

Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Sustained combustibility:	No data available

Self-ignition temperature

Solid:	No data available
Gas:	No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
	No data available
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapours may form explosive mixtures with air.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Oxidising agent

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

plastic

10.6. Hazardous decomposition products

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
109-66-0	pentane				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 423
	inhalation (4 h) vapour	LC50 > 25,3 mg/l	Rat	Secondary source (1993)	OECD Guideline 403
78-78-4	isopentane				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 401
	inhalation (4 h) vapour	LC50 > 25,3 mg/l	Rat	Secondary source (1993)	OECD Guideline 403
110-54-3	n-hexane				
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1982)	
	inhalation (4 h) vapour	LC50 73860 mg/l	Rat	Industrial Medicine, Vol. 39, No. 5, May	OECD Guideline 403
142-82-5	heptane				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
	inhalation (4 h) vapour	LC50 > 29,29 mg/l	Rat	Study report (1982)	OECD Guideline 403

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging fertility. (n-hexane)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

STOT-single exposure

May cause drowsiness or dizziness. (pentane)

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (n-hexane)

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
109-66-0	pentane						
	Acute fish toxicity	LC50	4,26 mg/l	96 h	Oncorhynchus mykiss	Study report (1997)	OECD Guideline 203
	Acute algae toxicity	ErC50	20,33 mg/l	72 h	Pseudokirchneriella subcapitata	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Acute crustacea toxicity	EC50	48,11 mg/l	48 h	Daphnia magna	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Fish toxicity	NOEC	6,165 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	10,76 mg/l	21 d	Daphnia magna	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
78-78-4	isopentane						
	Acute fish toxicity	LC50	4,26 mg/l	96 h	Oncorhynchus mykiss	Study report	OECD Guideline 203
	Acute algae toxicity	ErC50	25,12 mg/l	72 h	Pseudokirchneriella subcapitata	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Acute crustacea toxicity	EC50	59,44 mg/l	48 h	Daphnia magna	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Fish toxicity	NOEC	7,618 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	13,29 mg/l	21 d	Daphnia magna	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
110-54-3	n-hexane						
	Acute algae toxicity	ErC50	9,285 mg/l	72 h	Pseudokirchneriella subcapitata	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Acute crustacea toxicity	EC50	21,85 mg/l	48 h	Daphnia magna	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Fish toxicity	NOEC	2,8 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	4,888 mg/l	21 d	Daphnia magna	CONCAWE, Brussels, Belgium (2009)	The aquatic toxicity was estimated by a
142-82-5	heptane						
	Acute algae toxicity	ErC50	4,338 mg/l	72 h	Pseudokirchneriella subcapitata	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a

	Acute crustacea toxicity	EC50	1,5 mg/l	48 h	Daphnia magna	Study report (1987)	other: As described in: The evaluation o
	Fish toxicity	NOEC	1,284 mg/l	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	1 mg/l	21 d	Daphnia magna	SIDS Initial Assessment Report For SIAM	OECD Guideline 211

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
109-66-0	pentane	3,45
78-78-4	isopentane	4
110-54-3	n-hexane	4
142-82-5	heptane	4,5

BCF

CAS No	Chemical name	BCF	Species	Source
109-66-0	pentane	171	Pimephales promelas	QSAR in Environmenta
78-78-4	isopentane	171	Pimephales promelas	QSAR in Environmenta
110-54-3	n-hexane	501,187	Pimephales promelas	QSAR in Environmenta
142-82-5	heptane	552	calculated	Other company data (

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Do not allow to enter into surface water or drains.

Further information

There are no data available on the mixture itself.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (pentane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640D
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (pentane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601 640D
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (pentane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1993
14.2. UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (pentane)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3
Special Provisions:	A3
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes

Danger releasing substance: pentane

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):
Entry 3, Entry 40, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment

Additional information: P5c

National regulatory information

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,7,8,9,11,14,15.

Abbreviations and acronyms

Flam. Liq. 1: Flammable liquids, hazard category 1
Flam. Liq. 2: Flammable liquids, hazard category 2
Asp. Tox. 1: Aspiration hazard, hazard category 1
Skin Irrit. 2: Skin irritation, hazard category 2
Repr. 2: Reproductive toxicity, hazard category 2
STOT SE 3: Specific target organ toxicity - single exposure, hazard category 3
STOT RE 1: Specific target organ toxicity - repeated exposure, hazard category 1
Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2

Classification for mixtures and used evaluation method

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Repr. 2; H361f	Calculation method
Skin Irrit. 2; H315	Calculation method
STOT SE 3; H336	Calculation method
STOT RE 1; H372	Calculation method
Asp. Tox. 1; H304	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (nervous system) through prolonged or repeated exposure if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

Further Information

Provide appropriate information, instructions and training to users

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)