# Volcke Aerosol Company NV



# SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

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

#### 1.1. Product identifier

Product name: SILICONE SPRAY Product code: 094081-EN.

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

Lubricant. Only use the product as directed on the aerosol.

## 1.3. Details of the supplier of the safety data sheet

Registered company name: Volcke Aerosol Company NV. Address: Industrielaan 15. B-8520. Kuurne. Belgium. Telephone: +32 (0) 56 35 17 23. Fax: +32 (0) 56 35 30 69.

info@volcke-aerosol-connection.com http://www.volcke-aerosol-connection.com

#### 1.4. Emergency telephone number: +32 (0) 56 35 17 23.

Association/Organisation: http://www.volcke-aerosol-connection.com. Hours of operation: Monday - Thursday: 8:00-17:00; Friday: 8:00-13:00

#### Other emergency numbers

United Kingdom: National Poisons Information Service: +44 (0)844 892 0111. Ireland: Poisons Information Centre of Ireland: +353 1 809 2166. Malta: Emergency number: 112; Medicines & Poisons info Office: 2545 6508.

#### **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

## In compliance with EC regulation No. 1272/2008 and its amendments.

Aerosol, Category 1 (Aerosol 1, H222 - H229).

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H336).

Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

# 2.2. Label elements

Mixture for aerosol application.

# In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms







GHS09

GHS02

GHS07 Signal Word:

DANGER

Product identifiers:

EC 927-510-4 HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS EC 931-254-9 HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

Hazard statements:

Extremely flammable aerosol. H222

H229 Pressurised container: May burst if heated.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements - General:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

Precautionary statements - Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

Precautionary statements - Response:

P391 Collect spillage.

Precautionary statements - Storage :

P405 Store locked up.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

Precautionary statements - Disposal:

P501 Dispose of container to an approved waste disposal plant.

Other information:

#### 2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq$  0.1% published by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contains substances $\geq$  = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

Intentional misuse of the preparation by concentrating and inhaling the vapours can be harmful or fatal.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2. Mixtures

**Composition:** 

Identification	(EC) 1272/2008	Note	%
EC: 927-510-4	GHS07, GHS09, GHS08, GHS02		$50 \le x \% < 100$
REACH: 01-2119475515-33	Dgr		
	Flam. Liq. 2, H225		
HYDROCARBONS, C7, N-ALKANES,	Asp. Tox. 1, H304		
ISOALKANES, CYCLICS	Skin Irrit. 2, H315		
	STOT SE 3, H336		
	Aquatic Chronic 2, H411		
EC: 931-254-9	GHS07, GHS09, GHS08, GHS02		$25 \le x \% < 50$
REACH: 01-2119484651-34	Dgr		
	Flam. Liq. 2, H225		
HYDROCARBONS, C6, ISOALKANES, < 5 %	Asp. Tox. 1, H304		
N-HEXANE	Skin Irrit. 2, H315		
	STOT SE 3, H336		
	Aquatic Chronic 2, H411		
CAS: 106-97-8	GHS02	C	$10 \le x \% \le 25$
EC: 203-448-7	Dgr	[1]	
REACH: 01-2119474691-32-XXXX	Flam. Gas 1, H220	[7]	
	Press. Gas, H280		
BUTANE (< 0,1 % 1,3-BUTADIENE)			
CAS: 74-98-6	GHS02	[1]	$10 \le x \% \le 25$
EC: 200-827-9	Dgr	[7]	
REACH: 01-2119486944-21-XXXX	Flam. Gas 1, H220		
	Press. Gas, H280		
PROPANE			
CAS: 110-54-3	GHS07, GHS09, GHS08, GHS02	[1]	$1 \le x \% < 2.5$
EC: 203-777-6	Dgr	[2]	
REACH: 01-2119480412-44	Flam. Liq. 2, H225		
	Asp. Tox. 1, H304		
N-HEXANE	Skin Irrit. 2, H315		
	STOT SE 3, H336		
	Repr. 2, H361f		
	STOT RE 2, H373		
	Aquatic Chronic 2, H411		

CAS: 110-82-7	GHS07, GHS09, GHS08, GHS02	[1]	$0.1 \le x \% < 1$
EC: 203-806-2	Dgr		
REACH: 01-2119463273-41	Flam. Liq. 2, H225		
	Asp. Tox. 1, H304		
CYCLOHEXANE	Skin Irrit. 2, H315		
	STOT SE 3, H336		
	Aquatic Acute 1, H400		
	MAcute = 1		
	Aquatic Chronic 1, H410		
	M Chronic = 1		

#### **Specific concentration limits:**

Identification	Specific concentration limits	ATE
EC: 931-254-9		inhalation: ATE = 259354 mg/l
REACH: 01-2119484651-34		(dust/mist)
		dermal: ATE = 3350 mg/kg BW
HYDROCARBONS, C6, ISOALKANES, < 5 %		oral: ATE = 16750 mg/kg BW
N-HEXANE		
CAS: 110-54-3		inhalation: ATE = 185 mg/l 4h
EC: 203-777-6		(vapours)
REACH: 01-2119480412-44		oral: ATE = 25000 mg/kg BW
N-HEXANE		

#### Information on ingredients:

(Full text of H-phrases: see section 16)

- [7] Propellant gas
- [1] Substance for which maximum workplace exposure limits are available.
- [2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

#### **SECTION 4: FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

# 4.1. description of first aid measures

# In the event of exposure by inhalation:

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

If the person is unconscious, place in recovery position. Notify a doctor in all events, to ascertain whether observation and supportive hospital care will be necessary.

If breathing is irregular or has stopped, effect mouth-to-mouth resuscitation and call a doctor.

# In the event of splashes or contact with eyes:

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

# In the event of splashes or contact with skin:

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

#### In the event of swallowing:

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

See section 11.

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

If you feel unwell, seek medical advice (show the label if possible). If symptoms persist, always call a doctor.

#### **SECTION 5: FIREFIGHTING MEASURES**

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

# 5.1. Extinguishing media

If the aerosols are exposed to a fire: keep containers cool by spraying with water from a protected position.

#### Suitable methods of extinction

In the event of a fire, use:

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

#### Unsuitable methods of extinction

In the event of a fire, do not use:

- water jet

## 5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed:

- carbon monoxide (CO)
- carbon dioxide (CO2)

In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

#### 5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

If possible, stop the product stream. Spray from a protected position till the containers are cool. If possible, take the aerosols outside. Keep public at a distance.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

## For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

Avoid inhaling the vapors.

Avoid any contact with the skin and eyes.

If a large quantity has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.

# For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

# 6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures

Use drums to dispose of collected waste in compliance with current regulations (see section 13).

# 6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

## 6.4. Reference to other sections

No data available.

# **SECTION 7: HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.

# 7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure that there is adequate ventilation, especially in confined areas.

Remove contaminated clothing and protective equipment before entering eating areas.

# Fire prevention:

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

## Recommended equipment and procedures:

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in aerosols.

Avoid inhaling vapors. Carry out any industrial operation which may give rise to this in a sealed apparatus.

Provide vapor extraction at the emission source and also general ventilation of the premises.

Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions.

In all cases, recover emissions at source.

Packages which have been opened must be reclosed carefully and stored in an upright position.

## Prohibited equipment and procedures:

No smoking, eating or drinking in areas where the mixture is used.

Never open the packages under pressure.

## 7.2. Conditions for safe storage, including any incompatibilities

No data available.

# Storage

Keep out of reach of children.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Storage in a dry, frost-free and well ventilated place.

Store upright.

# **Packaging**

Always keep in packaging made of an identical material to the original.

#### 7.3. Specific end use(s)

No data available.

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

# 8.1. Control parameters

# Occupational exposure limits:

- European Union (2019/1831, 2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE):

CAS	VME-mg/m3:	VME-ppm:	VLE-mg/m3:	VLE-ppm:	Notes:
110-54-3	72	20	-	-	-
110-82-7	700	200	-	-	-

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020):

CHT WEE (Workplace exposure minus, EH 10/2003, Fourth Edition 2020):					
CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
106-97-8	600 ppm	750 ppm		Carc	
	1450 mg/m3	1810 mg/m3			
110-54-3	20 ppm				
	72 mg/m <sup>3</sup>				
110-82-7	100 ppm	300 ppm			
	$350 \text{ mg/m}^3$	$1050 \text{ mg/m}^3$			

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics : RCP-TWA-mg/m³ : 1300 Hydrocarbons, C6, isoalkanes, < 5 % n-hexane : RCP-TWA-mg/m³ : 700

- Ireland (Code of practice for the Chemical Agents Regulations, 2016):

CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
106-97-8	1000 ppm				
74-98-6	1000 ppm				
110-54-3	20 ppm				
	72 mg/m <sup>3</sup>				
110-82-7	200 ppm				
	700 mg/m <sup>3</sup>				

#### - Malta (L.N. 353/2007):

CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
110-54-3	20 ppm				
	72 mg/m3				
110-82-7	200 ppm				
	700 mg/m3				

# Derived no effect level (DNEL) or derived minimum effect level (DMEL):

CYCLOHEXANE (CAS: 110-82-7)

Final use: Workers.
Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 2016 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Short term systemic effects.

DNEL: 1400 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Short term local effects.

DNEL: 1400 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 700 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Long term local effects.

DNEL: 700 mg of substance/m3

N-HEXANE (CAS: 110-54-3)

Final use: Workers.
Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 11 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 75 mg of substance/m3

# HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

Final use: Workers.
Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 13964 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 5306 mg of substance/m3

Final use: Consumers.

Exposure method: Ingestion.

Potential health effects: Long term systemic effects.

DNEL: 1301 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 1377 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 1131 mg of substance/m3

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Final use: Workers.
Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 300 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 2085 mg of substance/m3

Final use: Consumers. Exposure method: Ingestion.

Potential health effects: Long term systemic effects.

DNEL: 149 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 149 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 477 mg of substance/m3

# Predicted no effect concentration (PNEC):

CYCLOHEXANE (CAS: 110-82-7)

Environmental compartment: Soil. PNEC: 3.38 mg/kg

Environmental compartment: Fresh water. PNEC: 0.207 mg/l

Environmental compartment: Sea water. PNEC: 0.207 mg/l

Environmental compartment: Fresh water sediment.

PNEC: 16.68 mg/kg

Environmental compartment: Marine sediment. PNEC: 16.68 mg/kg

N-HEXANE (CAS: 110-54-3)

Environmental compartment: Soil.
PNEC: 0.44 mg/kg

Environmental compartment: Fresh water. PNEC: 0.086 mg/l

Environmental compartment: Sea water. PNEC: 0.086 mg/l

Environmental compartment: Fresh water sediment.

PNEC: 1.0 mg/kg

Environmental compartment: Marine sediment. PNEC: 1.0 mg/kg

#### HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Environmental compartment: Soil.
PNEC: 0.53 mg/kg

Environmental compartment: Fresh water. PNEC: 0.096 mg/l

Environmental compartment: Sea water. PNEC: 0.096 mg/l

Environmental compartment: Fresh water sediment.

PNEC: 2.5 mg/kg

Environmental compartment: Marine sediment. PNEC: 2.5 mg/kg

# 8.2. Exposure controls

## Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):







Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

## - Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

Do not spray in the direction of the eyes.

#### - Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended:

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVA (Polyvinyl alcohol)

Not necessary at efficient use. Wash your hands after contact with skin.

## - Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing:

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin centret

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

Not necessary at efficient use. Wash skin that has been in contact with the product, with water and soap.

## - Respiratory protection

Avoid inhaling vapors.

If the ventilation is insufficient, wear appropriate breathing apparatus.

When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device.

Type of FFP mask:

Wear a disposable half-mask aerosol filter in accordance with standard EN149/A1.

Category:

- FFP1

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387:

- A1 (Brown)

Particle filter according to standard EN143:

- P1 (White)

Do not breathe spray. Use only in well-ventilated areas.

## Exposure controls linked to environmental protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

# 9.1. Information on basic physical and chemical properties

Physical state

Physical state : Fluid liquid.

Colour

Colourless, clear

Odour

Odour threshold: Not stated.
Odour: Specific

Freezing point

Freezing point / Freezing range: Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range: Not relevant.

Flammability

Flammability (solid, gas): Not stated.

Flammability: Extremely flammable

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%): Not stated. Explosive properties, upper explosivity limit (%): Not stated.

Flash point

Flash point interval: Not relevant.

Auto-ignition temperature

Self-ignition temperature: Not relevant.

Decomposition temperature

Decomposition point/decomposition range: Not relevant.

pН

pH (aqueous solution): Not stated.
pH: Not relevant.

Kinematic viscosity

Viscosity: Not stated.

**Solubility** 

Water solubility: Insoluble.
Fat solubility: Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water: Not stated.

Vapour pressure

Vapour pressure (50°C): Not relevant.

Density and/or relative density

Density: 0.619

Relative vapour density

Vapour density: Not stated.

9.2. Other information

VOC (g/l):575.67Pressure at  $20^{\circ}$ C: $\pm 3.5$  barPressure at  $50^{\circ}$ C:< 10 barWater content:< 0.3% w/w

## 9.2.1. Information with regard to physical hazard classes

No data available.

Aerosols

Chemical combustion heat : >= 30 kJ/g.

#### 9.2.2. Other safety characteristics

No data available.

## **SECTION 10: STABILITY AND REACTIVITY**

#### 10.1. Reactivity

No data available.

# 10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

#### 10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

Under normal conditions of storage and use, hazardous reactions will not occur.

#### 10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid:

- heat
- flames and hot surfaces
- fros

Protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from heat and sources of ignition. Storage in a dry, frost-free and well ventilated place.

## 10.5. Incompatible materials

No materials known by which a dangerous reaction can occur.

## 10.6. Hazardous decomposition products

The thermal decomposition may release/form:

- carbon monoxide (CO)
- carbon dioxide (CO2)

The product is stable. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# **SECTION 11: TOXICOLOGICAL INFORMATION**

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

Exposure to vapours from solvents in the mixture in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms produced will include headaches, numbness, dizziness, fatigue, muscular asthenia and, in extreme cases, loss of consciousness.

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Splashes in the eyes may cause irritation and reversible damage

Narcotic effects may occur, such as drowsiness, narcosis, decreased alertness, loss of reflexes, lack of coordination or dizziness.

Effects may also occur in the form of violent headaches or nausea, judgement disorder, giddiness, irritability, fatigue or memory disturbance.

## 11.1.1. Substances

Acute toxicity:

PROPANE (CAS: 74-98-6)

Inhalation route (Dusts/mist): LC50 > 10 mg/l

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Inhalation route (Vapours): LC50 > 10 mg/l

CYCLOHEXANE (CAS: 110-82-7)

Oral route : LD50 > 5000 mg/kg

Species: Rat

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route: LD50 > 2000 mg/kg

Species: Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Vapours) : LC50 > 32880 mg/l

Species: Rat

OECD Guideline 403 (Acute Inhalation Toxicity)

Duration of exposure: 4 h

N-HEXANE (CAS: 110-54-3)

Oral route : LD50 = 25000 mg/kg

Species: Rat

Dermal route : LD50 > 2000 mg/kg

Species: Rabbit

Inhalation route (Vapours): LC50 = 185 mg/l

Species: Rat

Duration of exposure: 4 h

HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

Oral route : LD50 = 16750 mg/kg

Species: Rat

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route : LD50 = 3350 mg/kg

Species : Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Dusts/mist): LC50 = 259354 mg/m3

Species: Rat

OECD Guideline 403 (Acute Inhalation Toxicity)

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Oral route : LD50 > 5840 mg/kg

Species: Rat

OECD Guideline 401 (Acute Oral Toxicity)

Dermal route: LD50 > 2920 mg/kg

Species: Rat

OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Vapours): LC50 > 23.3 mg/l

Species: Rat

OECD Guideline 403 (Acute Inhalation Toxicity)

Duration of exposure: 4 h

## Skin corrosion/skin irritation:

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane: Moderately irritating to skin with prolonged exposure.

n-Hexane: Irritating to skin.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: Skin contact can cause eczema due to damage. Repeated or prolonged skin contact may

cause dehydration and defatting.

Cyclohexane: May cause skin irritation in susceptible persons.

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

N-HEXANE (CAS: 110-54-3)

Corrosivity: No observed effect.

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Corrosivity: No observed effect.

Species : Rabbit

# Serious damage to eyes/eye irritation:

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane : May cause mild, short-lasting discomfort to eyes.

n-Hexane: Not irritating to eyes.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: May cause mild, short-lasting discomfort to eyes.

Cyclohexane: No adverse effects expected. Vapors may cause irritation to the eyes, respiratory system and the skin.

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

## Respiratory or skin sensitisation:

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane: Not likely to be sensitizing.

n-Hexane: Not sensitizing.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: Not sensitizing.

Cyclohexane: Not sensitizing.

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Guinea Pig Maximisation Test (GMPT): Non-sensitiser.

Species: Guinea pig

N-HEXANE (CAS: 110-54-3)

Local lymph node stimulation test: Non-Sensitiser.

# Germ cell mutagenicity:

CYCLOHEXANE (CAS: 110-82-7)

No mutagenic effect.

N-HEXANE (CAS: 110-54-3)

No mutagenic effect.

PROPANE (CAS: 74-98-6)

No mutagenic effect.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

No mutagenic effect.

HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

No mutagenic effect.

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

No mutagenic effect.

## Carcinogenicity:

CYCLOHEXANE (CAS: 110-82-7)

Carcinogenicity Test: Negative.

No carcinogenic effect.

N-HEXANE (CAS: 110-54-3)

Carcinogenicity Test: Negative.

No carcinogenic effect.

Species: Rat

PROPANE (CAS: 74-98-6)

Carcinogenicity Test: Negative.

No carcinogenic effect.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Carcinogenicity Test: Negative.

No carcinogenic effect.

HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

Carcinogenicity Test: Negative

No carcinogenic effect.

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Carcinogenicity Test: Negative.

No carcinogenic effect.

Species: Rat

## Reproductive toxicant:

CYCLOHEXANE (CAS: 110-82-7) No toxic effect for reproduction

Study on fertility:

OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Study on development: Species: Rat

OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

N-HEXANE (CAS: 110-54-3) Suspected of damaging fertility.

PROPANE (CAS: 74-98-6) No toxic effect for reproduction

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

No toxic effect for reproduction

HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

No toxic effect for reproduction

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

No toxic effect for reproduction

# Specific target organ systemic toxicity - single exposure :

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: To human: May cause drowsiness or dizziness.

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane: May cause drowsiness or dizziness.

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

# Specific target organ systemic toxicity - repeated exposure :

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: To human: Not classified for organ toxicity. For animals: No effects known.

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane : Not likely to cause organ damage.

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

#### Aspiration hazard:

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane : May be fatal if swallowed and enters airways.

n-Hexane: May be harmful if swallowed and enters airways.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: Symptoms of lung oedema mostly reveal after a few hours, intensified by physical effort.

May be fatal if swallowed and enters airways.

Cyclohexane: May be fatal if swallowed and enters airways.

Butane/Isobutane/Propane: Not applicable to gases and gas mixtures.

# 11.1.2. Mixture

No toxicological data available for the mixture.

## **SECTION 12: ECOLOGICAL INFORMATION**

Toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

## 12.1. Toxicity

## 12.1.1. Substances

N-HEXANE (CAS: 110-54-3)

Fish toxicity: LC50 = 12.51 mg/l

Species: Oncorhynchus mykiss Duration of exposure: 96 h

Other guideline

Crustacean toxicity: EC50 = 21.85 mg/l

Species : Daphnia magna Duration of exposure : 48 h

Other guideline

Algae toxicity: ECr50 = 9.29 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 72 h

Other guideline

HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

Fish toxicity: LC50 > 1 mg/l

Species : Oryzias latipes Duration of exposure : 48 h

Crustacean toxicity: EC50 = 3.87 mg/l

Species : Daphnia magna Duration of exposure : 48 h

Algae toxicity: ECr50 = 55 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 72 h

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Fish toxicity: LC50 > 13.4 mg/l

Species: Oncorhynchus mykiss Duration of exposure: 96 h

Crustacean toxicity: EC50 = 3 mg/l

Species : Daphnia magna Duration of exposure : 48 h

EC50 mg/l

Species : Daphnia magna Duration of exposure : 21 days

NOEC = 1 mg/1

Species : Daphnia magna Duration of exposure : 21 days

Algae toxicity: ECr50 = 20 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 72 h

NOEC = 6.3 mg/l

Species: Pseudokirchnerella subcapitata

Duration of exposure: 72 h

CYCLOHEXANE (CAS: 110-82-7)

Fish toxicity: LC50 = 4.53 mg/l

Species : Pimephales promelas Duration of exposure : 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity: EC50 = 0.9 mg/l

Species : Daphnia magna Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity: ECr50 = 9.317 mg/l

Species: Selenastrum capricornutum

Duration of exposure: 72 h

OECD Guideline 201 (Alga, Growth Inhibition Test)

#### **12.1.2.** Mixtures

No aquatic toxicity data available for the mixture.

#### 12.2. Persistence and degradability

Butane/Isobutane/Propane: Expected to be readily biodegradable.

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane: Expected to be readily biodegradable. Transformation due to hydrolysis and due to photolysis is not expected to be significant. Expected to degrade rapidly in air.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: Expected to be readily biodegradable. Transformation due to hydrolysis and due to photolysis is not expected to be significant. Expected to degrade rapidly in air.

#### 12.2.1. Substances

PROPANE (CAS: 74-98-6)

Biodegradability: Rapidly degradable.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Biodegradability: Rapidly degradable.

HYDROCARBONS, C6, ISOALKANES, < 5 % N-HEXANE

Biodegradability: Rapidly degradable.

HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS

Biodegradability: no degradability data is available, the substance is considered as not degrading

quickly.

DBO5/DCO = 0.98

CYCLOHEXANE (CAS: 110-82-7)

Chemical oxygen demand : DCO = 3.425 g/g

Five-day biochemical oxygen demand : DBO5 = 3.138 g/g

Biodegradability: Rapidly degradable.

DBO5/DCO = 0.92

N-HEXANE (CAS: 110-54-3)

Chemical oxygen demand : DCO = 3.527 g/g

Five-day biochemical oxygen demand : DBO5 = 3.064 g/g

Biodegradability: Rapidly degradable. DBO5/DCO = 0.87

#### 12.3. Bioaccumulative potential

Butane/Isobutane/Propane: Not expected to be dangerous for the aquatic environment.

n-Hexane: Does not significantly accumulate in organisms.

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane : Not determined. Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics : Not determined.

Cyclohexane: Bioaccumulation not expected.

#### 12.3.1. Substances

CYCLOHEXANE (CAS: 110-82-7)

Octanol/water partition coefficient : log Koe = 3.44

Bioaccumulation: BCF = 167

N-HEXANE (CAS: 110-54-3)

Octanol/water partition coefficient : log Koe = 4

Bioaccumulation: BCF = 501.2

#### 12.4. Mobility in soil

Butane/Isobutane/Propane: If released into the environment, the product will rapidly disperse into the atmosphere where it will undergo photochemical degradation.

n-Hexane: No data available.

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane: Highly volatile, will spread rapidly in air. It is not expected to extract to the sediment and the fraction fixed substances in the waste water.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics: Highly volatile, will spread rapidly in air. It is not expected to extract to the sediment and the fraction fixed substances in the waste water.

Cyclohexane: No data available.

#### 12.5. Results of PBT and vPvB assessment

n-Hexane: PBT/vPvB: No.

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane : PBT/vPvB : No. Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics : PBT/vPvB : No.

Cyclohexane: PBT/vPvB: No.

Butane/Isobutane/Propane: Not considered to be a PBT or a vPvB.

#### 12.6. Endocrine disrupting properties

No data available.

#### 12.7. Other adverse effects

No data available.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

## 13.1. Waste treatment methods

Do not pour into drains or waterways.

#### Waste:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Recycle or dispose of waste in complaince with current legislation, namely the Ordinance on the Avoidance and Disposal of Waste (Waste Ordinance, VVEA, SR 814.600), the Ordinance on Waste from June 22, 2005 (VeVA, SR 814, 610) and DETEC Ordinance on Waste Lists.

Disposal of the product (the unused product, residual quantities, the cured product, emptied but uncleaned packaging): preferably by an approved waste collector or a specialist disposal company. Suitable containers and methods of waste treatment should be used.

#### Soiled packaging:

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

# Codes of wastes (Decision 2014/955/EC, Directive 2008/98/EEC on hazardous waste):

15 01 10 \* packaging containing residues of or contaminated by dangerous substances

#### **SECTION 14: TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 - ICAO/IATA 2021).

#### 14.1. UN number or ID number

1950

# 14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

# 14.3. Transport hazard class(es)

- Classification:

2.1

ADR/RID Label: Limited Quantity: 2.1 is not applicable.

#### 14.4. Packing group

-

#### 14.5. Environmental hazards

- Environmentally hazardous material:



The symbol above is not applicable for "Limited Quantity".

14.6. Special precautions for user

4.0. Special	precaution	iis ioi usci								
ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	2	5F	-	2.1	-	1 L	190 327 344	E0	2	D
							625			
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage	Segregation	
								Handling		
	2	See SP63	-	See SP277	F-D. S-U	63 190 277	E0	- SW1 SW22	SG69	
						327 344 381				
						959				
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	2.1	-	-	203	75 kg	203	150 kg	A145 A167	E0	
								A802		
	2.1	-	-	Y203	30 kg G	-	-	A145 A167	E0	
								A802		

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

# 14.7. Maritime transport in bulk according to IMO instruments

No data available.

# **SECTION 15: Regulatory information**

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

#### - Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/643 (ATP 16)
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/849 (ATP 17)

# - Container information:

No data available.

## - Particular provisions:

No data available.

# 15.2. Chemical safety assessment

A chemical safety assessment has been carried out for the following products or for the substances in these products:

Hydrocarbons, C6, isoalkanes, < 5 % n-hexane

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

# **SECTION 16: OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

# Wording of the phrases mentioned in section 3:

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause 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.

#### Abbreviations:

LD50: The dose of a test substance resulting in 50% lethality in a given time period.

LC50: The concentration of a test substance resulting in 50% lethality in a given period.

EC50: The effective concentration of substance that causes 50% of the maximum response.

ECr50: The effective concentration of substance that causes 50% reduction in growth rate.

NOEC: The concentration with no observed effect.

REACH: Registration, Evaluation, Authorization and Restriction of Chemical Substances.

ATE: Acute Toxicity Estimate

BW: Body Weight

DNEL: Derived No-Effect Level

PNEC : Predicted No-Effect Concentration CMR: Carcinogenic, mutagenic or reprotoxic.

STEL: Short-term exposure limit
TWA: Time Weighted Averages
TLV: Threshold Limit Value (exposure)
AEV: Average Exposure Value.

ADR: European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods. IATA : International Air Transport Association. ICAO : International Civil Aviation Organisation

RID: Regulations concerning the International carriage of Dangerous goods by rail.

WGK: Wassergefahrdungsklasse (Water Hazard Class).

GHS02: Flame

GHS07 : Exclamation mark GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic. vPvB: Very persistent, very bioaccumulable. SVHC: Substances of very high concern.

# **Difference Report**

Revision: N°4 (17/02/2022) / GHS n°2 / HCS n°) / Version: N°3 (22/02/2022)

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

Revision: N°3 (23/07/2018) / GHS n°1 / HCS n°) / Version: N°1 (23/07/2018)

# SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

# **SECTION 2: HAZARDS IDENTIFICATION**

In compliance with EC regulation No. 1272/2008 and its amendments.

P261 Avoid breathing spray.

P403 Store in a well-ventilated place.

P273 Avoid release to the environment.

Precautionary statements - Response :

P391 Collect spillage.

## 2.3. Other hazards

The mixture does not contains substances> 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

osition	

Pop	Composition:			
Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Agustic Chronic 2, H411	EC: 927-510-4	GHS07, GHS09, GHS08, GHS02		$10 \le x \% \le 25$
HYDROCARBONS, C7, N. ALKANES, ISOALKANES, CYCLICS    Sin Irrit. 2, H315     STOT SE 2, H336     Aquatic Chronic 2, H411     GHS97, GHS09, GHS08, GHS02     Pam. Liq. 2, H215     STOT SE 3, H336     Aquatic Chronic 2, H411     CAS: H0.54.3     CAS: H0.54.3     CAS: H0.54.3     CAS: H0.54.3     CREST SE 2, H336     CAS: H0.54.3     CAS: H0.54.3	REACH: 01-2119475515-33	<del>Dgr</del>		
HYDROCARBONS, C7, N. ALKANES, ISOALKANES, CYCLICS    Sin Irrit. 2, H315     STOT SE 2, H336     Aquatic Chronic 2, H411     GHS97, GHS09, GHS08, GHS02     Pam. Liq. 2, H215     STOT SE 3, H336     Aquatic Chronic 2, H411     CAS: H0.54.3     CAS: H0.54.3     CAS: H0.54.3     CAS: H0.54.3     CREST SE 2, H336     CAS: H0.54.3     CAS: H0.54.3		Flam. Lig. 2, H225		
SECTION   Skin   Intri. 2, 11115   STOT SE 3, 11336   Aquatic Chronic 2, 11411	HYDROCARBONS, C7, N-ALKANES			
STOT SE 3, H336   Aquatic Chronic 2, H411		* · · · · · · · · · · · · · · · · · ·		
Aquatic Chronic 2, 14411	ISOMERATIVES, CTCLICS			
GHS07, GHS08, GHS02   H0 ← x % < 25				
Des	EC: 021 254 0	CHEOT CHEON CHEON CHEON		10 < 0/ < 25
Flam. Liq. 2, H225				10 < X % < 23
HYDROCARBONS, C6, ISOALKANES, < 5 %   Asp. Tox. 1, 14304   Skin Irrit. 2, 11315   STOT SE 3, 11336   Aquatic Chronic 2, 11411   CHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, 11315   STOT SE 3, 11336   Repr. 2, 11361f   STOT SE 3, 11336   Repr. 2, 11361f   STOT SE 3, 11336   Repr. 2, 11361f   STOT RE 2, 11373   Aquatic Chronic 2, 11411   CE: 927-510-4   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, 11225   Asp. Tox. 1, 11304   Skin Irrit. 2, 11315   STOT SE 3, 11336   Repr. 2, 11361f   STOT RE 2, 11373   Aquatic Chronic 2, 11411   CE: 927-510-4   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, 11304   Skin Irrit. 2, 11315   STOT SE 3, 11336   Aquatic Chronic 2, 11411   CF: 931-254-9   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, 1135   STOT SE 3, 11336   Aquatic Chronic 2, 11411   CHS07, GHS09, GHS08, GHS02   CF: 931-254-9   Flam. Liq. 2, 1125   Asp. Tox. 1, 1304   Skin Irrit. 2, 11315   STOT SE 3, 11336   Aquatic Chronic 2, 11411   CAS: 110-54-3   GHS07, GHS09, GHS08, GHS02   CF: 931-77-6   Dgr   GHS07, GHS09, GHS08, GHS02   CF: 932-777-6   Dgr   CF: 932-77-6   Dgr   CF: 932-77-6   Dgr   CF: 932-77-6   Dgr   CF: 93	REACH: 01-2119/18/1651-3/1			
Skin   Firit   2,				
STOT SE 2, H336	, ,			
Aquatic Chronic 2, H411   CAS: 110-54-3   GHS07, GHS09, GHS08, GHS02   [1]   0.1 < x % < 1	N-HEXANE			
CAS: 110-54-3				
Dgr   Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411				
EC: 203-777-6  REACH: 01-2119480412-44  N-HEXANE  N-HEXANE  REACH: 01-2119480412-44  N-HEXANE  REACH: 01-2119480412-44  N-HEXANE  REACH: 01-2119475515-33  Aquatic Chronic 2, H411  EC: 927-510-4  REACH: 01-2119475515-33  Pgr Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT RE 2, H373  Aquatic Chronic 2, H411  EC: 927-510-4  REACH: 01-2119484651-34  Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336  Aquatic Chronic 2, H411  EC: 931-254-9  REACH: 01-2119484651-34  HYDROCARBONS, C6, ISOALKANES, < 5%  Asp. Tox. 1, H304  Skin Irrit. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336  Aquatic Chronic 2, H411  CAS: 110-54-3  GHS07, GHS09, GHS08, GHS02  Dgr Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336  Aquatic Chronic 2, H411  CAS: 110-54-3  GHS07, GHS09, GHS08, GHS02  [1]  1 <= x % < 2.5  Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H315  STOT SE 3, H336  Apartic Chronic 2, H411  CAS: 110-54-3  GHS07, GHS09, GHS08, GHS02  [2]  REACH: 01-2119480412-44  N-HEXANE  Skin Irrit. 2, H315  STOT SE 3, H336  Apartic Chronic 2, H411  STOT SE 3, H336  Apartic Chronic 2, H411  STOT SE 3, H336  Apartic Chronic 2, H411  STOT SE 3, H336  STOT SE 3, H336	CAS: 110-54-3	GHS07, GHS09, GHS08, GHS02	<del>[1]</del>	$0.1 \le x \% \le 1$
Flam. Liq. 2, H225	EC: 203-777-6	Dgr	<del>[2]</del>	
Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Repr. 2, H361f   STOT RE 2, H373   Aquatic Chronic 2, H411	REACH: 01-2119480412-44			
Skin Irrit. 2, H315   STOT SE 3, H336   Repr. 2, H361f   STOT RE 2, H373   Aquatic Chronic 2, H411				
STOT SE 3, H336   Repr. 2, H36H     STOT RE 2, H373   Aquatic Chronic 2, H411     EC: 927-510-4   GHS07, GHS09, GHS08, GHS02     REACH: 01-2119475515-33   Dgr   Flam. Liq. 2, H225     HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS   Skin Irrit. 2, H315     STOT SE 3, H336   Aquatic Chronic 2, H411     EC: 931-254-9   GHS07, GHS09, GHS08, GHS02     REACH: 01-2119484651-34   Dgr   Flam. Liq. 2, H225     HYDROCARBONS, C6, ISOALKANES, < 5 %   Asp. Tox. 1, H304     Skin Irrit. 2, H315   STOT SE 3, H336     Aquatic Chronic 2, H411     CAS: 110-54-3   GHS07, GHS09, GHS08, GHS02   [1]   1 <= x % < 2.5     Dgr   Flam. Liq. 2, H215     STOT SE 3, H336   Aquatic Chronic 2, H411     CAS: 110-54-3   GHS07, GHS09, GHS08, GHS02   [2]     REACH: 01-2119480412-44   Flam. Liq. 2, H225     Asp. Tox. 1, H304   Skin Irrit. 2, H315     STOT SE 3, H336   STOT SE 3, H336     All Skin Irrit. 2, H315   STOT SE 3, H336   STOT SE 3, H336     All Skin Irrit. 2, H315   STOT SE 3, H336   STOT SE 3, H336     All Skin Irrit. 2, H315   STOT SE 3, H336   STOT SE 3, H336     All Skin Irrit. 2, H315   STOT SE 3, H336   STOT S	N-HEXANE			
Repr. 2, H361f   STOT RE 2, H373   Aquatic Chronic 2, H411     EC: 927-510-4   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411     EC: 931-254-9   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411     EC: 931-254-9   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, H225   HYDROCARBONS, C6, ISOALKANES, < 5 % Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411     CAS: 110-54-3   GHS07, GHS09, GHS08, GHS02   Dgr   [2]   REACH: 01-2119480412-44   Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Shin Irrit. 2, H315	I IIII II II			
STOT RE 2, H373   Aquatic Chronic 2, H411				
Aquatic Chronic 2, H411   SC: 927-510-4   GHS07, GHS09, GHS08, GHS02   Dgr   Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   Store St. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Store St. 1, H304   Skin Irrit. 2, H315   Store				
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Dgr   Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411	EC: 027 510 4			50 < 0/ < 100
Flam. Liq. 2, H225   Asp. Tox. 1, H304   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411				30 <= x % < 100
HYDROCARBONS, C7, N-ALKANES, ISOALKANES, CYCLICS   Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411	REACH: 01-21194/5515-33			
Skin Irrit. 2, H315   STOT SE 3, H336   Aquatic Chronic 2, H411				
STOT SE 3, H336 Aquatic Chronic 2, H411  EC: 931-254-9 REACH: 01-2119484651-34 Dgr Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411  CAS: 110-54-3 EC: 203-777-6 REACH: 01-2119480412-44 N-HEXANE STOT SE 3, H3304 Skin Irrit. 2, H315 STOT SE 3, H304 Skin Irrit. 2, H315 STOT SE 3, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336				
Aquatic Chronic 2, H411  EC: 931-254-9  REACH: 01-2119484651-34  HYDROCARBONS, C6, ISOALKANES, < 5 % Asp. Tox. 1, H304  N-HEXANE  CAS: 110-54-3  EC: 203-777-6  REACH: 01-2119480412-44  N-HEXANE  Aquatic Chronic 2, H411  CAS: 10-2119480412-44  REACH: 01-2119480412-44  N-HEXANE  Aquatic Chronic 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336  Aquatic Chronic 2, H411  CAS: 110-54-3  EC: 203-777-6  Dgr  [2]  Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336	ISOALKANES, CYCLICS			
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REACH: 01-2119484651-34  HYDROCARBONS, C6, ISOALKANES, < 5 % Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336  Aquatic Chronic 2, H411  CAS: 110-54-3  EC: 203-777-6  REACH: 01-2119480412-44  N-HEXANE  Dgr Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  Flam. Liq. 2, H225  Asp. Tox. 1, H304  Skin Irrit. 2, H315  STOT SE 3, H336				
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STOT SE 3, H336 Aquatic Chronic 2, H411  CAS: 110-54-3 EC: 203-777-6 Dgr REACH: 01-2119480412-44 Flam. Liq. 2, H225 Asp. Tox. 1, H304 N-HEXANE Skin Irrit. 2, H315 STOT SE 3, H336				
Aquatic Chronic 2, H411  CAS: 110-54-3 EC: 203-777-6 Dgr REACH: 01-2119480412-44 P-HEXANE Skin Irrit. 2, H315 STOT SE 3, H336  Aquatic Chronic 2, H411  [1] 1 <= x % < 2.5 [2] [2] [3] 1 <= x % < 2.5 [4] 1 <= x % < 2.5 [5] 1 <= x % < 2.5 [6] 1 <= x % < 2.5 [7] 1 <= x % < 2.5 [8] 1 <= x % < 2.5 [9] 1 <= x % < 2.5 [1] 1 <= x % < 2.5 [1] 1 <= x % < 2.5 [1] 1 <= x % < 2.5 [2] 1 <= x % < 2.5 [3] 1 <= x % < 2.5 [4] 1 <= x % < 2.5 [5] 1 <= x % < 2.5 [6] 1 <= x % < 2.5 [7] 1 <= x % < 2.5 [8] 1 <= x % < 2.5 [9] 1 <= x % < 2.5 [1] 1 <= x % < 2.5 [1] 1 <= x % < 2.5 [2] 2 <= x % < 2.5 [3] 3 <= x % < 2.5 [4] 4 <= x % < 2.5 [5] 5 <= x % < 2.5 [6] 7 <= x % < 2.5 [7] 8 <= x % < 2.5 [8] 9 <= x % < 2.5 [9] 9 <= x % < x % < 2.5 [9] 9 <= x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x % < x %				
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EC: 203-777-6 Dgr REACH: 01-2119480412-44 Flam. Liq. 2, H225 Asp. Tox. 1, H304 N-HEXANE Skin Irrit. 2, H315 STOT SE 3, H336	CAS: 110-54-3		Г11	$1 \le v^{0/0} \le 2.5$
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Asp. Tox. 1, H304  N-HEXANE Skin Irrit. 2, H315 STOT SE 3, H336			[L <sup>2</sup> ]	
N-HEXANE Skin Irrit. 2, H315 STOT SE 3, H336	KEAUN: 01-2119480412-44			
STOT SE 3, H336	N. HEWANE			
	N-HEXANE			
D 2 H2(1)				
		Repr. 2, H361f		
STOT RE 2, H373				
Aquatic Chronic 2, H411		Aquatic Chronic 2, H411		

**Specific concentration limits:** 

Identification	Specific concentration limits	ATE
EC: 931-254-9		inhalation: ATE = 259354 mg/l
REACH: 01-2119484651-34		(dust/mist)
		dermal: ATE = 3350 mg/kg BW
HYDROCARBONS, C6, ISOALKANES, < 5 %		oral: ATE = 16750 mg/kg BW
N-HEXANE		
CAS: 110-54-3		inhalation: ATE = 185 mg/l 4h
EC: 203-777-6		(vapours)
REACH: 01-2119480412-44		oral: ATE = 25000 mg/kg BW
N-HEXANE		

# **SECTION 7: HANDLING AND STORAGE**

## Recommended equipment and procedures:

Avoid inhaling vapors.

Storage

Store upright.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

- Impervious gloves in accordance with standard EN ISO 374-2

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

- Body protection

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact.

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

- Respiratory protection

Wear a disposable half-mask aerosol filter in accordance with standard EN149.

Wear a disposable half-mask aerosol filter in accordance with standard EN149/A1.

# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**General information:** 

Spray.

Color: Colourless, clear

Important health, safety and environmental information

Flash point: <0°C

9.2. Other information

<del>VOC (g/l):</del> 575.67

Colour

Colourless, clear

Odour

Odour threshold: Not stated.

Freezing point

Freezing point / Freezing range : Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range: Not relevant.

Flammability

Flammability (solid, gas): Not stated.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%): Not stated. Explosive properties, upper explosivity limit (%): Not stated.

Flash point

Flash point interval: Not relevant.

**Auto-ignition temperature** 

Self-ignition temperature: Not relevant.

**Decomposition temperature** 

Decomposition point/decomposition range: Not relevant.

pН

pH (aqueous solution): Not stated.

Kinematic viscosity

Viscosity: Not stated.

**Solubility** 

Fat solubility: Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water: Not stated.

Relative vapour density

Vapour density: Not stated.

9.2. Other information

VOC (g/l): 575.67

#### 9.2.1. Information with regard to physical hazard classes

No data available.

## 9.2.2. Other safety characteristics

No data available.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### Skin corrosion/skin irritation:

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

# Serious damage to eyes/eye irritation:

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

# Respiratory or skin sensitisation:

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

# Specific target organ systemic toxicity - single exposure :

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

# Specific target organ systemic toxicity - repeated exposure :

Butane/Isobutane/Propane: Based on available data, the classification criteria are not met.

Aspiration hazard:

Butane/Isobutane/Propane: Not applicable to gases and gas mixtures.

# **SECTION 12: ECOLOGICAL INFORMATION**

## 12.5. Results of PBT and vPvB assessment

Butane/Isobutane/Propane: Not considered to be a PBT or a vPvB.

## **SECTION 14: TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2017–IMDG 2016–ICAO/IATA 2017).

	ADR/RII	Class	Code	e Pac	k gr. Lab	el Ident	t. LQ	Provis.	EQ	Cat.		Tunnel
	2	<u>,</u>	<del>5F</del>	_	2.1	-	1-L	190 327 344	E0	2	Đ	
								<del>625</del>				
	IMDG	Class	s 2°La	bel Pac	k gr. LQ	EMS	Provis	. EQ				_
	2	<u> </u>	See SP63	-	See SP277	F-D,S-U	63 190 277	E0				
П							225 244 204					

					Í	<del>327 344 381</del> <del>959</del>			
Transpo	rt product	in compli	ance with	provisions of	the ADR for	road. RID for	rail. IMDG for	sea and ICAO/IA	TA for air

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 - ICAO/IATA 2021).

	2	5F	-	2.1	-	1 L	190 327 344	E0	2	D	
							625				
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	StowageHandling		Segr	egation

	2	See SP63	-	See SP277	F-D. S-U	63 190 277	E0	- SW1 SW22	SG69
						327 344 381			
						959			

## **SECTION 15: Regulatory information**

# SECTION 15 : REGULATORY INFORMATION

- Classification and labelling information included in section 2:

# -EU Regulation No. 1272/2008 amended by EU Regulation No. 2017/776 (ATP 10)

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/643 (ATP 16)
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/849 (ATP 17)

# **SECTION 16: OTHER INFORMATION**

#### **Abbreviations:**

LD50: The dose of a test substance resulting in 50% lethality in a given time period.

LC50: The concentration of a test substance resulting in 50% lethality in a given period.

EC50: The effective concentration of substance that causes 50% of the maximum response.

ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.

NOEC: The concentration with no observed effect.

REACH: Registration, Evaluation, Authorization and Restriction of Chemical Substances.

ATE : Acute Toxicity Estimate

BW: Body Weight