

## Hranicon 50, Hranicon 51

Issue date: 25/03/2021 according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
 Revision date: 05/11/2023 Supersedes version of: 01/10/2023

Version: 2.0

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

#### 1.1. Product identifier

Product form : Mixture  
 Product name : Hranicon 50, Hranicon 51  
 UFI : HRT2-20X3-C005-VU32

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

##### 1.2.1. Relevant identified uses

Intended for general public  
 Main use category : Professional use, Consumer use  
 Use of the substance/mixture : Contact adhesive  
 Function or use category : Adhesives, binding agents

##### 1.2.2. Uses advised against

No additional information available

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

##### Distributor

Hranipex Czech Republic k.s.  
 J. Rýznerové 97, Komorovice  
 CZ- 396 01 Humpolec  
 Czech Republic  
 T +420 565 501 211  
[cz-hranipex@hranipex.com](mailto:cz-hranipex@hranipex.com) - [www.hranipex.cz](http://www.hranipex.cz)  
 E-mail address of competent person responsible for the SDS :  
[sds@regartis.com](mailto:sds@regartis.com)

##### Supplier

Hranipex Ltd.  
 Unit 2 Radial Park, Birmingham Business Park  
 Birmingham, B37 7YN  
 United Kingdom  
 T +44 121 767 9180 - F 0121 782 6250  
[uk-hranipex@hranipex.com](mailto:uk-hranipex@hranipex.com) - [www.hranipex.co.uk](http://www.hranipex.co.uk)

#### 1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	Only for healthcare professionals

### SECTION 2: Hazards identification

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

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

Flammable liquids, Category 2 H225  
 Skin corrosion/irritation, Category 2 H315

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Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410
Full text of H- and EUH-statements: see section 16	

### Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause drowsiness or dizziness. Causes skin irritation. Causes serious eye irritation. Very toxic to aquatic life with long lasting effects.

## 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Contains

: cyclohexane; Ethyl acetate; acetone; propan-2-one; propanone; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; Hydrocarbons, C6, isoalkanes, <5% n-hexane

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.  
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements

: EUH208 - Contains rosin; colophony(8050-09-7). May produce an allergic reaction.

## 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
cyclohexane	CAS-No.: 110-82-7 EC-No.: 203-806-2 EC Index-No.: 601-017-00-1 REACH-no: 01-2119463273-41-0016	30 – 40	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Ethyl acetate	CAS-No.: 141-78-6 EC-No.: 205-500-4 EC Index-No.: 607-022-00-5 REACH-no: 01-2119475103-46	15 – 22	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
acetone; propan-2-one; propanone	CAS-No.: 67-64-1 EC-No.: 200-662-2 EC Index-No.: 606-001-00-8 REACH-no: 01-2119471330-49	10 – 17	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	CAS-No.: 64742-49-0 EC-No.: 927-510-4 REACH-no: 01-2119475515-33	5 – 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Hydrocarbons, C6, isoalkanes, <5% n-hexane	EC-No.: 931-254-9 REACH-no: 01-2119484651-34	3 – 8	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
rosin; colophony	CAS-No.: 8050-09-7 EC-No.: 232-475-7 EC Index-No.: 650-015-00-7 REACH-no: 01-2119480418-32	< 1	Skin Sens. 1, H317
zinc oxide	CAS-No.: 1314-13-2 EC-No.: 215-222-5 EC Index-No.: 030-013-00-7 REACH-no: 01-2119463881-32	< 0.3	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Call a physician immediately. If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label. Remove victim to fresh air. Remove soiled clothing promptly. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a doctor.
First-aid measures after skin contact	: Rinse and then wash skin thoroughly with water and soap. Take off immediately all contaminated clothing. Get medical advice if skin irritation persists.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Do not give milk. Call a physician immediately.

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

Symptoms/effects	: Dizziness, headaches, nausea. Gastrointestinal complaints.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Risk of lung oedema.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

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

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	: Carbon oxides (CO and CO <sub>2</sub> ). Other toxic gases. Do not breathe fumes from fires or vapours from decomposition.

### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Do not allow run-off from fire-fighting to enter drains or water courses.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear proper protective equipment.
Emergency procedures	: Evacuate personnel to a safe area. Keep unprotected persons away. Ventilate spillage area. Eliminate every possible source of ignition. No open flames, no sparks, and no smoking. Stop leaks if it can be done without personal risk. Avoid contact with skin and eyes. Do not breathe vapours.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Prevent liquid from entering sewers, watercourses, underground or low areas. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment	: Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Do not allow to enter drains or water courses.
Methods for cleaning up	: Collect all waste in suitable and labelled containers and dispose according to local legislation. Use non-sparking tools. Do not flush with water.
Other information	: Ventilate spillage area.

### 6.4. Reference to other sections

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

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed	: Flammable vapours may accumulate in the container.
Precautions for safe handling	: Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Technical measures	: Store and use with adequate ventilation. Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Store tightly closed in a dry, cool and well-ventilated place. Protect from heat and direct sunlight. Keep away from food and drink. Store locked up.
Incompatible products	: Store away from. Oxidizing agents, bases and reducing agents.
Heat and ignition sources	: Keep away from sources of ignition - No smoking.
Information on mixed storage	: Storage class: 3

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

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

cyclohexane (110-82-7)	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Cyclohexane
IOEL TWA	700 mg/m <sup>3</sup>
IOEL TWA [ppm]	200 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Cyclohexane
WEL TWA (OEL TWA) [1]	350 mg/m <sup>3</sup>
WEL TWA (OEL TWA) [2]	100 ppm
WEL STEL (OEL STEL)	1050 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	300 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Ethyl acetate (141-78-6)	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Ethyl acetate
IOEL TWA	734 mg/m <sup>3</sup>
IOEL TWA [ppm]	200 ppm
IOEL STEL	1468 mg/m <sup>3</sup>

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### Ethyl acetate (141-78-6)

IOEL STEL [ppm]	400 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Ethyl acetate
WEL TWA (OEL TWA) [1]	734 mg/m <sup>3</sup>
WEL TWA (OEL TWA) [2]	200 ppm
WEL STEL (OEL STEL)	1468 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	400 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### rosin; colophony (8050-09-7)

<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Rosin-based solder flux fume
WEL TWA (OEL TWA) [1]	0.05 mg/m <sup>3</sup>
WEL STEL (OEL STEL)	0.15 mg/m <sup>3</sup>
Remark	Sen (Capable of causing occupational asthma)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### acetone; propan-2-one; propanone (67-64-1)

<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Acetone
IOEL TWA	1210 mg/m <sup>3</sup>
IOEL TWA [ppm]	500 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Acetone
WEL TWA (OEL TWA) [1]	1210 mg/m <sup>3</sup>
WEL TWA (OEL TWA) [2]	500 ppm
WEL STEL (OEL STEL)	3620 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	1500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

<b>cyclohexane (110-82-7)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	2016 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	700 mg/m <sup>3</sup>

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<b>cyclohexane (110-82-7)</b>	
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	59.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	206 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1186 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0.207 mg/l
PNEC aqua (marine water)	0.207 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	16.68 mg/kg dwt
PNEC sediment (marine water)	16.68 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	3.38 mg/kg dwt
<b>Ethyl acetate (141-78-6)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	63 mg/m <sup>3</sup>
Long-term - systemic effects, inhalation	734 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	4.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	367 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	37 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0.24 mg/l
PNEC aqua (marine water)	0.024 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	1.15 mg/kg dwt
PNEC sediment (marine water)	0.115 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	0.148 mg/kg dwt
<b>rosin; colophony (8050-09-7)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	25 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	176.32 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	15 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	52.174 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	15 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0.005 mg/l
PNEC aqua (marine water)	0.0005 mg/l

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<b>rosin; colophony (8050-09-7)</b>	
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	108 mg/kg dwt
PNEC sediment (marine water)	10.8 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	21.4 mg/kg dwt
<b>acetone; propan-2-one; propanone (67-64-1)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	186 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1210 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	62 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	200 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	62 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	10.6 mg/l
PNEC aqua (marine water)	1.06 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	30.4 mg/kg dwt
PNEC sediment (marine water)	3.04 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	29.5 mg/kg dwt
<b>Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (64742-49-0)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	300 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2085 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	149 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	477 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	149 mg/kg bodyweight/day
<b>Hydrocarbons, C6, isoalkanes, &lt;5% n-hexane</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	13964 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5306 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	1301 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1137 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1377 mg/kg bodyweight/day

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zinc oxide (1314-13-2)	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	83 mg/kg bw/day
Long-term - systemic effects, inhalation	5 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	0.83 mg/kg dwt
Long-term - systemic effects, inhalation	2.5 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	83 mg/kg bw/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	20.6 µg/L
PNEC aqua (marine water)	6.1 µg/L
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	117.8 mg/kg dwt
PNEC sediment (marine water)	56.5 mg/kg dwt

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Provide adequate general and local exhaust ventilation.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure. Wear recommended personal protective equipment.

#### 8.2.2.1. Eye and face protection

##### Eye protection:

tightly fitting safety goggles. EN166

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing. Working shoes (EN ISO 13287, EN 20347)

##### Hand protection:

Chemical resistant gloves (according to European standard ISO 374-1 or equivalent). Follow the glove manufacturer's specific recommendations when selecting the appropriate thickness, material, and permeability.

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Protective gloves	Chloroprene rubber	3 (> 60 minutes)	0.7	x	EN ISO 374

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. An approved organic vapour respirator/supplied air or self-contained breathing apparatus must be used when vapour concentration exceeds applicable exposure limits

#### 8.2.2.4. Thermal hazards

No additional information available

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**8.2.3. Environmental exposure controls****Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Wash protective equipment and clothing before reuse. Always wash hands after handling the product. Avoid contact with skin, eyes and clothing. Do not breathe vapour/aerosol. Do not eat, drink or smoke in areas where product is used.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Depending on the label.
Odour	: Solvent odour.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: 55 °C cyclohexane
Flammability	: Not applicable
Explosive properties	: The product is not explosive. May form an explosive mixture with air.
Lower explosion limit	: 1.2 vol %
Upper explosion limit	: 8.3 vol % cyclohexane
Flash point	: < -18 °C cyclohexane
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: > 20.5 mm <sup>2</sup> /s
Viscosity, dynamic	: 350 mPa·s (20°C)
Solubility	: Insoluble in water. Miscible with : Organic solvents.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 104 hPa cyclohexane
Vapour pressure at 50°C	: Not available
Density	: 0.81 – 0.85 g/cm <sup>3</sup>
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

No additional information available

**9.2.2. Other safety characteristics**

No additional information available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Highly flammable liquid and vapour.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

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### 10.5. Incompatible materials

Strong acids, strong bases and oxidation agents.

### 10.6. Hazardous decomposition products

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

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

#### cyclohexane (110-82-7)

LD50 oral rat	12705 mg/kg
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#### Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (64742-49-0)

LD50 oral rat	> 5840 mg/kg
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LD50 dermal rabbit	> 2920 mg/kg
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LC50 Inhalation - Rat	23.2 mg/l
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#### zinc oxide (1314-13-2)

LD50 oral rat	7950 mg/kg
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LC50 Inhalation - Rat	2500 mg/l
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Skin corrosion/irritation : Causes skin irritation.  
 Serious eye damage/irritation : Causes serious eye irritation.  
 Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)  
 Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)  
 Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)  
 Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)  
 STOT-single exposure : May cause drowsiness or dizziness.

#### cyclohexane (110-82-7)

STOT-single exposure	May cause drowsiness or dizziness.
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#### Ethyl acetate (141-78-6)

STOT-single exposure	May cause drowsiness or dizziness.
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#### acetone; propan-2-one; propanone (67-64-1)

STOT-single exposure	May cause drowsiness or dizziness.
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#### Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (64742-49-0)

STOT-single exposure	May cause drowsiness or dizziness.
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#### Hydrocarbons, C6, isoalkanes, <5% n-hexane

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)  
 Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

#### Hranicon 50, Hranicon 51

Viscosity, kinematic	> 20.5 mm <sup>2</sup> /s
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### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

#### 11.2.2. Other information

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

#### cyclohexane (110-82-7)

LC50 - Fish [1]	4.53 mg/l
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EC50 - Crustacea [1]	0.9 mg/l
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EC50 72h - Algae [1]	4.425 mg/l
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#### Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (64742-49-0)

LC50 - Fish [1]	13.4 mg/l
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EC50 - Crustacea [1]	3 mg/l
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#### zinc oxide (1314-13-2)

EC50 - Crustacea [1]	0.413 mg/l
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### 12.2. Persistence and degradability

#### Hranicon 50, Hranicon 51

Persistence and degradability	No information available.
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### 12.3. Bioaccumulative potential

#### Hranicon 50, Hranicon 51

Bioaccumulative potential	No information available.
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### 12.4. Mobility in soil

#### Hranicon 50, Hranicon 51

Ecology - soil	No information available.
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### 12.5. Results of PBT and vPvB assessment

#### Hranicon 50, Hranicon 51

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

### 12.7. Other adverse effects

Additional information : Do not allow product to spread into the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.  
 Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
 Sewage disposal recommendations : Do not dispose of waste into sewer. Do not allow into drains or water courses.  
 Product/Packaging disposal recommendations : Handle uncleaned empty containers as full ones. Dispose in a safe manner in accordance with local/national regulations.  
 Additional information : Flammable vapours may accumulate in the container. Do not remove as household garbage.  
 Ecology - waste materials : Avoid release to the environment.  
 European List of Waste (LoW, EC 2150/2002) : 15 01 10\* - packaging containing residues of or contaminated by dangerous substances  
 HP Code : HP3 - "Flammable:"  
 – flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;  
 – flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;  
 – flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;  
 – flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;  
 – water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;  
 – other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.  
 HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.  
 HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.  
 HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

## SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1133	UN 1133	UN 1133	UN 1133	UN 1133
<b>14.2. UN proper shipping name</b>				
ADHESIVES	ADHESIVES	Adhesives	ADHESIVES	ADHESIVES

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ADR	IMDG	IATA	ADN	RID
<b>Transport document description (ADR)</b>				
UN 1133 ADHESIVES, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1133 ADHESIVES, 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1133 Adhesives, 3, II, ENVIRONMENTALLY HAZARDOUS	UN 1133 ADHESIVES, 3, II, ENVIRONMENTALLY HAZARDOUS	UN 1133 ADHESIVES, 3, II, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 640D
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP8
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33
Orange plates	: 

Tunnel restriction code (ADR)	: D/E
EAC code	: •3YE

#### Transport by sea

Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP8
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: B

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Properties and observations (IMDG) : Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.

### Air transport

PCA Excepted quantities (IATA) : E2  
 PCA Limited quantities (IATA) : Y341  
 PCA limited quantity max net quantity (IATA) : 1L  
 PCA packing instructions (IATA) : 353  
 PCA max net quantity (IATA) : 5L  
 CAO packing instructions (IATA) : 364  
 CAO max net quantity (IATA) : 60L  
 Special provisions (IATA) : A3  
 ERG code (IATA) : 3L

### Inland waterway transport

Classification code (ADN) : F1  
 Special provisions (ADN) : 640D  
 Limited quantities (ADN) : 5 L  
 Excepted quantities (ADN) : E2  
 Equipment required (ADN) : PP, EX, A  
 Ventilation (ADN) : VE01  
 Number of blue cones/lights (ADN) : 1

### Rail transport

Classification code (RID) : F1  
 Special provisions (RID) : 640D  
 Excepted quantities (RID) : E2  
 Packing instructions (RID) : P001, IBC02, R001  
 Special packing provisions (RID) : PP1  
 Mixed packing provisions (RID) : MP19  
 Portable tank and bulk container instructions (RID) : T4  
 Portable tank and bulk container special provisions (RID) : TP1, TP8  
 Tank codes for RID tanks (RID) : LGBF  
 Transport category (RID) : 2  
 Colis express (express parcels) (RID) : CE7  
 Hazard identification number (RID) : 33

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

##### EU restriction list (REACH Annex XVII)

Reference code	Applicable on
3(a)	Hranicon 50, Hranicon 51 ; cyclohexane ; Ethyl acetate ; acetone; propan-2-one; propanone ; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane
3(b)	Hranicon 50, Hranicon 51 ; cyclohexane ; Ethyl acetate ; acetone; propan-2-one; propanone ; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane
3(c)	Hranicon 50, Hranicon 51 ; cyclohexane ; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane
40.	cyclohexane ; Ethyl acetate ; acetone; propan-2-one; propanone ; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics ; Hydrocarbons, C6, isoalkanes, <5% n-hexane

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### EU restriction list (REACH Annex XVII)

Reference code	Applicable on
57.	cyclohexane

### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

### Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

#### ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Combined Nomenclature code (CN)	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Acetone	67-64-1	2914 11 00	ex 3824 99 92

Please see [https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives\\_en](https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives_en)

### Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Acetone		67-64-1	2914 11 00	Category 3		Annex I

#### 15.1.2. National regulations

Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP)

#### United Kingdom

British National Regulations

: Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives, in the valid wording.  
 Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste, in the valid wording.  
 UK Waste Regulations.  
 UK REACH.  
 GB CLP.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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### SECTION 16: Other information

#### Indication of changes

Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Added	
	Issue date	Modified	
1.1	UFI on SDS 1.1	Added	
1.2	Intended for general public	Added	
1.2	Main use category	Modified	
1.2	Use of the substance/mixture	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.1	Intended for general public	Added	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.1	First-aid measures after ingestion	Modified	
5.1	Suitable extinguishing media	Modified	
5.2	Hazardous decomposition products in case of fire	Modified	
7.2	Information on mixed storage	Modified	
8.2	Respiratory protection	Modified	
8.2	Other information	Modified	
8.2	Hand protection	Modified	
8.2	Eye protection	Modified	
9.1	Viscosity, kinematic	Added	
9.1	Vapour pressure	Added	
9.1	Upper explosive limit (UEL)	Modified	
9.1	Flash point	Modified	
9.1	Boiling point	Modified	
9.1	Density	Modified	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
15.1	British National Regulations	Added	
16	Data sources	Modified	

#### Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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### Abbreviations and acronyms:

IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
LD50	Median lethal dose
LC50	Median lethal concentration
EC50	Median effective concentration
DNEL	Derived-No Effect Level
PNEC	Predicted No-Effect Concentration
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative

Data sources	: ECHA Guidance on the compilation of safety data sheets ECHA C&L Inventory database. Supplier's safety documents.
Training advice	: Normal use of this product shall imply use in accordance with the instructions on the packaging. Provide SDS to employees. Follow general rules on handling chemical substances and/or mixtures.

### Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains rosin; colophony(8050-09-7). May produce an allergic reaction.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

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**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

Flam. Liq. 2	H225	On basis of test data
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
STOT SE 3	H336	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.