

**KROIL****Safety Data Sheet**SDS EU format according to COMMISSION REGULATION (EU) 2020/878
Issue date: 01/09/2021 Version: 1.0**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**Product form : Mixture
Trade name : KROIL**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : Penetrant

1.2.2. Uses advised against

Restrictions on use : None known

1.3. Details of the supplier of the safety data sheetKano Laboratories, LLC
1000 E. Thompson Lane, Nashville, TN 37211, USA
T +1 (615) 833-4101
sales@kanolabs.com - www.kroil.com**1.4. Emergency telephone number**

Emergency number : (Chemical Spills, Leaks, Fire, Exposure or Accident only): CHEMTREC 1-800-424-9300 (in the US), 1-703-527-3887 (Outside the US)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**Flammable liquids, Category 3 H226
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335
Aspiration hazard, Category 1 H304

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

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Aspiration hazard. May be fatal if swallowed and enters airways.

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS02

GHS07

GHS08

Signal word (CLP) : Danger

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Contains	: 2,6-dimethylheptan-4-one; di-isobutyl ketone, Proprietary Ingredient, 2-methylpropan-1-ol; iso-butanol, Distillates (petroleum), hydrotreated light
Hazard statements (CLP)	: H226 - 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. H335 - May cause respiratory irritation.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical, lighting, ventilating equipment. P261 - Avoid breathing vapours. P264 - Wash hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear eye protection, protective gloves. P301+P310 - If swallowed: Immediately call a poison center or doctor. P331 - Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER, doctor if you feel unwell. P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use carbon dioxide (CO ₂), foam, dry extinguishing powder to extinguish. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Other hazards which do not result in classification : None known.

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Distillates (petroleum), hydrotreated heavy naphthenic substance with a Community workplace exposure limit	CAS-No.: 64742-52-5 EC-No.: 265-155-0 EC Index-No.: 649-465-00-7	30-50	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated light	CAS-No.: 64742-47-8 EC-No.: 265-149-8	20-40	Asp. Tox. 1, H304

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Proprietary Ingredient	-	5-15	Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
2,6-dimethylheptan-4-one; di-isobutyl ketone	CAS-No.: 108-83-8 EC-No.: 203-620-1 EC Index-No.: 606-005-00-X	5-15	Flam. Liq. 3, H226 STOT SE 3, H335
4-hydroxy-4-methylpentan-2-one; diacetone alcohol	CAS-No.: 123-42-2 EC-No.: 204-626-7 EC Index-No.: 603-016-00-1	1-<3	Flam. Liq. 3, H226 Eye Irrit. 2, H319
2-methylpropan-1-ol; iso-butanol	CAS-No.: 78-83-1 EC-No.: 201-148-0 EC Index-No.: 603-108-00-1	1-<3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
2,6-dimethylheptan-4-one; di-isobutyl ketone	CAS-No.: 108-83-8 EC-No.: 203-620-1 EC Index-No.: 606-005-00-X	(10 ≤C < 100) STOT SE 3, H335
4-hydroxy-4-methylpentan-2-one; diacetone alcohol	CAS-No.: 123-42-2 EC-No.: 204-626-7 EC Index-No.: 603-016-00-1	(10 ≤C < 100) Eye Irrit. 2, H319

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	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water and soap. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
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	: Aspiration hazard. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects	: May cause drowsiness or dizziness. May cause an allergic skin reaction. Causes eye irritation. Causes skin irritation. May be fatal if swallowed and enters airways.
Inhalation	: May cause respiratory irritation.
Skin	: Irritation. May cause an allergic skin reaction.
Eyes	: Causes serious eye irritation.
Ingestion	: Aspiration hazard. May be fatal if swallowed and enters airways.
Chronic symptoms	: None known.

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

If accidentally swallowed obtain immediate medical attention.

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry powder. Foam. Carbon dioxide. Use water spray or fog.
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
Hazardous decomposition products in case of fire : On combustion, forms: carbon oxides (CO and CO₂).

5.3. Advice for firefighters

- 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

- General measures : Ventilate area.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing mist/vapours/spray. vapours. Avoid contact with skin and eyes.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing mist/vapours/spray. spray, vapours. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible materials : Strong oxidizers.

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

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

7.3. Specific end use(s)

Penetrant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

2,6-dimethylheptan-4-one; di-isobutyl ketone (108-83-8)	
United Kingdom - Occupational Exposure Limits	
Local name	2,6-Dimethylheptan-4-one
WEL TWA (OEL TWA) [1]	148 mg/m ³
WEL TWA (OEL TWA) [2]	25 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Mineral oils (AHRMO)
IOEL TWA	5 mg/m ³ (inhalable fraction)
Remark	(Year of adoption 2010)
Regulatory reference	SCOEL Recommendations
4-hydroxy-4-methylpentan-2-one; diacetone alcohol (123-42-2)	
United Kingdom - Occupational Exposure Limits	
Local name	4-Hydroxy-4-methylpentan-2-one
WEL TWA (OEL TWA) [1]	241 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	362 mg/m ³
WEL STEL (OEL STEL) [ppm]	75 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
2-methylpropan-1-ol; iso-butanol (78-83-1)	
United Kingdom - Occupational Exposure Limits	
Local name	2-Methylpropan-1-ol
WEL TWA (OEL TWA) [1]	154 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	231 mg/m ³
WEL STEL (OEL STEL) [ppm]	75 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

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light red.
Appearance	: Liquid.
Odour	: Solvents.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosive limit (LEL)	: 0.6 vol %
Upper explosive limit (UEL)	: 10.9 vol %
Flash point	: 55.5 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: < 20.5 mm ² /s
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Relative density	: 0.8596
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: 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

No dangerous reactions known under normal conditions of use.

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. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. acids. reducing 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)	: Based on available data, the classification criteria are not met
Acute toxicity (dermal)	: Based on available data, the classification criteria are not met
Acute toxicity (inhalation)	: Based on available data, the classification criteria are not met

2,6-dimethylheptan-4-one; di-isobutyl ketone (108-83-8)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 14.5 mg/l/4h Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)

LD50 oral rat	> 5000 mg/kg bodyweight
---------------	-------------------------

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5 mg/l
Proprietary Ingredient	
LD50 oral rat	3200 mg/kg
LD50 dermal rabbit	> 5000 ml/kg
4-hydroxy-4-methylpentan-2-one; diacetone alcohol (123-42-2)	
LD50 oral rat	3002 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2738 - 3290
LD50 dermal rat	> 1875 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
2-methylpropan-1-ol; iso-butanol (78-83-1)	
LD50 oral rat	2830 – 3350 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 18.2 mg/l
Distillates (petroleum), hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 6.8 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met
Carcinogenicity	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Based on available data, the classification criteria are not met
Distillates (petroleum), hydrotreated light (64742-47-8)	
NOAEL (animal/male, F0/P)	≥ 3000 mg/kg bodyweight Animal: rat, Animal sex: male
STOT-single exposure	: May cause respiratory irritation.
2,6-dimethylheptan-4-one; di-isobutyl ketone (108-83-8)	
STOT-single exposure	May cause respiratory irritation.
2-methylpropan-1-ol; iso-butanol (78-83-1)	
STOT-single exposure	May cause respiratory irritation. May cause drowsiness or dizziness.
STOT-repeated exposure	: Based on available data, the classification criteria are not met
2,6-dimethylheptan-4-one; di-isobutyl ketone (108-83-8)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	5.74 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

4-hydroxy-4-methylpentan-2-one; diacetone alcohol (123-42-2)	
LOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	≥ 4.106 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
2-methylpropan-1-ol; iso-butanol (78-83-1)	
NOAEL (oral, rat, 90 days)	> 1450 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard : May be fatal if swallowed and enters airways.

KROIL	
Viscosity, kinematic	< 20.5 mm ² /s
Hydrocarbon	Yes

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : None known

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Based on available data, the classification criteria are not met

Hazardous to the aquatic environment, long-term (chronic) : Based on available data, the classification criteria are not met

2,6-dimethylheptan-4-one; di-isobutyl ketone (108-83-8)	
LC50 - Fish [1]	30 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>)
EC50 - Crustacea [1]	37.2 mg/l Test organisms (species): <i>Daphnia magna</i>
Proprietary Ingredient	
LC50 - Fish [1]	18.35 mg/l
EC50 - Crustacea [1]	17 mg/l
4-hydroxy-4-methylpentan-2-one; diacetone alcohol (123-42-2)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): <i>Oryzias latipes</i>
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
LOEC (chronic)	> 100 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC (chronic)	100 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
2-methylpropan-1-ol; iso-butanol (78-83-1)	
LC50 - Fish [1]	1430 mg/l

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

2-methylpropan-1-ol; iso-butanol (78-83-1)	
EC50 - Crustacea [1]	1100 mg/l
EC50 72h - Algae [1]	1799 mg/l
NOEC (chronic)	20 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Distillates (petroleum), hydrotreated light (64742-47-8)	
EC50 - Crustacea [1]	> 1000 mg/l

12.2. Persistence and degradability

Distillates (petroleum), hydrotreated light (64742-47-8)	
Biodegradation	85 % OECD 301F (28d)

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : None known

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information






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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1993	UN 1993	UN 1993	UN 1993	UN 1993
14.2. UN proper shipping name				
FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone)	FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone)	Flammable liquid, n.o.s. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone)	FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone)	FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone)

KROIL


Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
Transport document description				
UN 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone), 3, III, (D/E)	UN 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone), 3, III	UN 1993 Flammable liquid, n.o.s. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone), 3, III	UN 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone), 3, III	UN 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS Petroleum Distillates ; 2,6-dimethylheptan-4-one; diisobutyl ketone), 3, III
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 274, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	: 

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

Transport by sea

Special provisions (IMDG)	: 223, 274, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-E

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

EmS-No. (Spillage) : S-E
Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y344
PCA limited quantity max net quantity (IATA) : 10L
PCA packing instructions (IATA) : 355
PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
Special provisions (IATA) : A3
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 274, 601
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : F1
Special provisions (RID) : 274, 601
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE4
Hazard identification number (RID) : 30

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

KROIL

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Listed on KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Abbreviations and acronyms:	
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful 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, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Flam. Liq. 3	H226	On basis of test data
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
STOT SE 3	H335	Calculation method
Asp. Tox. 1	H304	Calculation method

Safety Data Sheet (SDS), EU

The information contained herein has been developed based upon current available scientific data. New information may be developed from time to time which may render the conclusions of this report obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or the consequences of its use or misuse.