

## Safety data sheet according to ChemO 2015 – SR 813.11

Printing date 12.07.2021

Version number 1

Revision: 12.07.2021

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

#### - 1.1 Product identifier

- Trade name: ergo 0690

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

No further relevant information available.

- Application of the substance / the mixture Adhesives

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

##### - Manufacturer/Supplier:

Kisling AG  
Motorenstrasse 102  
CH-8620 Wetzikon  
Tel: +41- 58-272 0 272

- Further information obtainable from: Product safety department

- Department issuing MSDS: ergo@kisling.com

#### - 1.4 Emergency telephone number:

Tox Info Suisse: 145 / +41-44-2 51 51 51  
+49-700-24 112 112 (KAR)

### SECTION 2: Hazards identification

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

##### - Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

Carc. 2 H351 Suspected of causing cancer.

STOT SE 3 H335 May cause respiratory irritation.

#### - 2.2 Label elements

##### - Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

##### - Hazard pictograms



GHS02 GHS05 GHS07 GHS08

- Signal word Danger

##### - Hazard-determining components of labelling:

cyclohexanone  
tetrahydrofuran

##### - Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

##### - Precautionary statements

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.

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P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**- Additional information:**

EUH019 May form explosive peroxides.

**- Labelling of packages where the contents do not exceed 125 ml****- Hazard pictograms**

GHS02 GHS05 GHS07 GHS08

**- Signal word** Danger**- Hazard-determining components of labelling:**

cyclohexanone

tetrahydrofuran

**- Hazard statements**

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

**- Precautionary statements**

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.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

**- 2.3 Other hazards****- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**- 3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

**- Dangerous components:**

CAS: 109-99-9 EINECS: 203-726-8 Index number: 603-025-00-0	tetrahydrofuran Flam. Liq. 2, H225; Carc. 2, H351; Eye Irrit. 2, H319; STOT SE 3, H335	> 30 - ≤ 50%
CAS: 108-94-1 EINECS: 203-631-1 Index number: 606-010-00-7 Reg.nr.: 01-2119453616-35-xxxx	cyclohexanone Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	> 15 - ≤ 30%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg.nr.: 01-2119457290-43-xxxx	butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	≥ 10 - ≤ 15%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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### SECTION 4: First aid measures

#### - 4.1 Description of first aid measures

##### - General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

##### - After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

##### - After skin contact:

After contact with skin, wash immediately with plenty of soap and water.

If skin irritation continues, consult a doctor.

##### - After eye contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

##### - After swallowing:

Rinse out mouth and then drink plenty of water.

If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

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

No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

#### - 5.1 Extinguishing media

- Suitable extinguishing agents: CO<sub>2</sub>, extinguishing powder, foam

- For safety reasons unsuitable extinguishing agents: Water

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

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire.

#### - 5.3 Advice for firefighters

##### - Protective equipment:

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

##### - Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Avoid contact with the eyes and skin.

#### - 6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow product to reach sewage system or any water course.

#### - 6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the material collected according to regulations.

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**- 6.4 Reference to other sections**

Fumes can combine with air to form an explosive mixture.  
 See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 10 for information on "stability and reactivity".  
 See Section 13 for disposal information.

**SECTION 7: Handling and storage****- 7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.  
 Prevent formation of aerosols.  
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

**- Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.  
 Protect against electrostatic charges.  
 Do not spray against a flame or glowing object. Keep away from open flames, hot surfaces and sources of ignition.

**- 7.2 Conditions for safe storage, including any incompatibilities****- Storage:**

**- Requirements to be met by storerooms and receptacles:** Store in a cool location.

**- Information about storage in one common storage facility:** Store away from foodstuffs.

**- Further information about storage conditions:**

Keep receptacle tightly sealed.  
 Store receptacle in a well ventilated area.  
 Store under lock and key and with access restricted to technical experts or their assistants only.  
 Store under lock and key and out of the reach of children.

**- Maximum storage temperature:** 30 °C

**- Minimum storage temperature:** 5 °C

**- Storage class (TRGS 510, Storage of hazardous substances in non-stationary containers):** 3

**- 7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection****- 8.1 Control parameters**

**- Additional information about design of technical facilities:** No further data; see item 7.

**- Ingredients with limit values that require monitoring at the workplace:****109-99-9 tetrahydrofuran**

MAK (Switzerland)	Short-term value: 300 mg/m <sup>3</sup> , 100 ppm Long-term value: 150 mg/m <sup>3</sup> , 50 ppm H B SSc;
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**108-94-1 cyclohexanone**

MAK (Switzerland)	Short-term value: 200 mg/m <sup>3</sup> , 50 ppm Long-term value: 100 mg/m <sup>3</sup> , 25 ppm H B SSc;
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**78-93-3 butanone**

MAK (Switzerland)	Short-term value: 590 mg/m <sup>3</sup> , 200 ppm Long-term value: 590 mg/m <sup>3</sup> , 200 ppm H B SSc;
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**- DNELs****108-94-1 cyclohexanone**

Dermal	Longterm System	20 mg/kg bw/day (Worker)
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Inhalative	Longterm Local	20 mg/m <sup>3</sup> (Worker)
	Longterm System	20 mg/m <sup>3</sup> (Worker)

**- PNECs****108-94-1 cyclohexanone**

PNEC Freshwater	0.0329 mg/l
PNEC Freshwater sed	0.0951 mg/kg
PNEC Marinewater	0.0329 mg/l
PNEC Soil	0.0143 mg/kg

**- Ingredients with biological limit values:****109-99-9 tetrahydrofuran**

BAT (Switzerland)	2 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Biol. Parameter: Tetrahydrofuran
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**108-94-1 cyclohexanone**

BAT (Switzerland)	100 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende, bei Langzeitexposition: Nach mehreren vorangegangenen Schichten Biol. Parameter: Gesamt-1,2-Cyclohexandiol
	12 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende, bei Langzeitexposition: Nach mehreren vorangegangenen Schichten Biol. Parameter: Gesamt-Cyclohexanol

**78-93-3 butanone**

BAT (Switzerland)	2 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Biol. Parameter: 2-Butanon (MEK)
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**- Additional information:** The lists valid during the making were used as basis.

**- 8.2 Exposure controls****- Personal protective equipment:****- General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Do not inhale dust / smoke / mist.

Avoid contact with the eyes and skin.

**- Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**- Protection of hands:**

Protective gloves (EN 374)

Check protective gloves prior to each use for their proper condition.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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**- Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**- Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**- Eye protection:** Tightly sealed goggles**- Body protection:** Use protective suit.

### SECTION 9: Physical and chemical properties

**- 9.1 Information on basic physical and chemical properties****- General Information****- Appearance:**

**Form:** Pasty  
**Colour:** Colourless

**- Odour:** Characteristic**- Odour threshold:** Not determined.**- pH-value:** Not determined.**- Change in condition**

**Melting point/freezing point:** Undetermined.  
**Initial boiling point and boiling range:** 85 °C

**- Flash point:** 11 °C**- Flammability (solid, gas):** Not applicable.**- Ignition temperature:** 321 °C**- Decomposition temperature:** Not determined.**- Auto-ignition temperature:** Product is not self-igniting.**- Explosive properties:** May form explosive peroxides.**- Explosion limits:****Lower:** 1.2 Vol %**Upper:** 12 Vol %**- Oxidising properties** Not determined.**- Vapour pressure at 20 °C:** 113 hPa**- Density at 20 °C:** 0.96 g/cm<sup>3</sup>**- Relative density** Not determined.**- Vapour density** Not determined.**- Evaporation rate** Not determined.**- Solubility in / Miscibility with water:**

Fully miscible.

**- Partition coefficient: n-octanol/water:** Not determined.**- Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**- 9.2 Other information**

No further relevant information available.

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#### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Protect from exposure to the light.  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
No dangerous reactions if used and stored according to specifications.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**  
Oxidisers  
Strong acids and strong alkalis.
- **10.6 Hazardous decomposition products:**  
No dangerous products of decomposition if used and stored according to specifications.

#### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

##### - LD/LC50 values relevant for classification:

###### 109-99-9 tetrahydrofuran

Oral	LD50	3,000 mg/kg (Rat, male/female)
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###### 108-94-1 cyclohexanone

Oral	LD50	1,890 - 2,650 mg/kg (Rat, male/female)
Dermal	LD50	794 - 3,160 mg/kg (Rabbit)
Inhalative	LC50/4 h	> 6.2 mg/l (Rat, male/female)

###### 78-93-3 butanone

Oral	LD50	3,300 mg/kg (Rat, male/female)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**  
No experimentally found toxicological data are available for this preparation.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Limited evidence of a carcinogenic effect.  
Carc. 2
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**  
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

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### SECTION 12: Ecological information

#### - 12.1 Toxicity

##### - Aquatic toxicity:

<b>108-94-1 cyclohexanone</b>
EC50/24 h   820 mg/l (DA) (DIN 38412 Part 11)

##### - Toxicity to fish:

<b>108-94-1 cyclohexanone</b>
LC50/96 h   527 mg/l (Pimephales promelas) (OECD 203)

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

##### - Additional ecological information:

##### - General notes:

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

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

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

#### - 13.1 Waste treatment methods

- **Recommendation** Disposal must be made according to official regulations.

#### - Uncleaned packaging:

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

#### - 14.1 UN-Number

- <b>ADR, IMDG, IATA</b>	UN1133
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#### - 14.2 UN proper shipping name

- <b>ADR</b>	1133 ADHESIVES
- <b>IMDG, IATA</b>	ADHESIVES

#### - 14.3 Transport hazard class(es)

##### - ADR



##### - Class

- <b>Label</b>	3 (F1) Flammable liquids.
	3

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**- IMDG, IATA**

- Class 3 Flammable liquids.  
- Label 3

- 14.4 Packing group  
- ADR, IMDG, IATA III

- 14.5 Environmental hazards: Not applicable.

- 14.6 Special precautions for user Warning: Flammable liquids.  
- Hazard identification number (Kemler code): 30  
- EMS Number: F-E,S-D  
- Stowage Category B

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

**- Transport/Additional information:****- ADR**

- Limited quantities (LQ) 5L  
- Excepted quantities (EQ) Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml  
- Transport category 3  
- Tunnel restriction code D/E

**- IMDG**

- Limited quantities (LQ) 5L  
- Excepted quantities (EQ) Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation": UN 1133 ADHESIVES, 3, III

**SECTION 15: Regulatory information****- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****- Chemical safety assessment**

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

**- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**- REGULATION (EU) 2019/1148**

**- Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

**- Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**- National regulations:**

- **Waterhazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.

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- <b>15.2 Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.
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### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### - Relevant phrases

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.

#### - Abbreviations and acronyms:

- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids – Category 2
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Carc. 2: Carcinogenicity – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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