

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 18.03.2019

Version number 12

Revision: 06.02.2019

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

- **1.1 Product identifier**
- **Trade name:** Carlofon Korrotec 480 Art. 40117 UFI 873K-U3HP-6008-RJM1
- **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** Corrosion inhibitors
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Carlofon GmbH
Grüninger Weg 32-34
D-35415 Pohlheim
Tel: +49 (0) 64 04 / 205 16-0
Fax: +49 (0) 64 04 / 205 16-44
E-mail: info@carlofon.de
- **Further information obtainable from:** Research & Development
- **1.4 Emergency telephone number:**
Giftmotruf Bonn +49 (0) 228 19 240 Beratung in Deutsch und Englisch.

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS08

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **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



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
Naphtha (petroleum), hydrotreated light

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Naphtha (petroleum), hydrodesulfurized heavy
Naphtha (petroleum), hydrotreated heavy
Naphtha (petroleum), hydrotreated heavy

· Hazard statements

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P251 Pressurized container: Do not pierce or burn, even after use.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH208 Contains Calcium Sulfonate. May produce an allergic reaction.

· 2.3 Other hazards

The petroleum naphtha / petroleum distillate / lubricating oil meet the requirements for not being classified as carcinogenic (<0,1% benzene alt<3% (w/w) DMSO extract (IP 346)).

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with additions.

· Dangerous components:

CAS: 64742-49-0 927-241-2 Reg.nr.: 01-2119471843-32	Naphtha (petroleum), hydrotreated light Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 3, H412	10-<25%
CAS: 64742-48-9 919-857-5 Reg.nr.: 01-2119463258-33	Naphtha (petroleum), hydrotreated heavy Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336	10-<25%
CAS: 74-98-6 EINECS: 200-827-9	Propane liquefied Flam. Gas 1, H220; Press. Gas C, H280	10-<25%
CAS: 106-97-8 EINECS: 203-448-7	Butane, pure Flam. Gas 1, H220; Press. Gas C, H280	10-<25%
CAS: 64742-82-1 919-446-0 Reg.nr.: 01-2119458049-33	Naphtha (petroleum), hydrodesulfurized heavy Flam. Liq. 3, H226; STOT RE 1, H372; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	5-<10%
CAS: 64742-48-9 919-857-5 Reg.nr.: 01-2119463258-33	Naphtha (petroleum), hydrotreated heavy Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336	5-<10%
CAS: 61789-86-4	Calcium Sulfonate Skin Sens. 1B, H317	3-<5%

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:** Supply fresh air or oxygen; call for doctor.

· **After skin contact:** If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **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:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **5.3 Advice for firefighters**

· **Protective equipment:** Mount respiratory protective device.

· **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Avoid contact with skin, eyes and clothes.

· **6.2 Environmental precautions:**

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

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

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Absorb liquid components with liquid-binding material.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Use only in well ventilated areas.

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

Keep ignition sources away - Do not smoke.

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Keep respiratory protective device available.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

· **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

CAS: 106-97-8 Butane, pure

WEL Short-term value: 1810 mg/m³, 750 ppm
Long-term value: 1450 mg/m³, 600 ppm
Carc (if more than 0.1% of buta-1.3-diene)

- **Regulatory information WEL:** EH40/2011

· **DNELs**

CAS: 64742-49-0 Naphtha (petroleum), hydrotreated light

Oral	Long-term - systemic effects, general population	120 mg/kg bw/day (General Population)
Dermal	Long-term - systemic effects, worker	208 mg/kg bw/day (Worker)
	Long-term - systemic effects, general population	125 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, worker	871 mg/m3 (Worker)
	Long-term - systemic effects, general population	185 mg/m3 (General Population)

CAS: 64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	Long-term - systemic effects, general population	125 mg/kg bw/day (General Population)
Dermal	Long-term - systemic effects, worker	208 mg/kg bw/day (Worker)
	Long-term - systemic effects, general population	125 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, worker	871 mg/m3 (Worker)
	Long-term - systemic effects, general population	185 mg/m3 (General Population)

- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

- **Respiratory protection:**

Short term filter device:



Filter AX

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· **Protection of hands:**



Protective gloves

· **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.

Nitrile rubber

Recommended thickness of the material: $\geq 0,12$ mm

· **Penetration time of glove material**

> 480 min.

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

· **Eye protection:**

Safety glasses



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Aerosol
Colour:	Transparent
Odour:	Solvent-like
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	-44 °C

· **Flash point:** <-20 °C (DIN 53213)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** > 200 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower:	0.6 Vol %
Upper:	10.9 Vol %

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· Vapour pressure At 20 °C:	8300 hPa
· Density At 20 °C:	0.728 g/cm ³ (DIN 51757)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	79.4 %
Solids content:	21.0 % (DIN 53216)
· 9.2 Other information	No further relevant information available.
· VOC (EU):	79.35 %
· VOC (EU):	577.7 g/l
· VOCV:	79.35 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide

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:

CAS: 64742-49-0 Naphtha (petroleum), hydrotreated light

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>5000 mg/kg (RABBIT)
Inhalative	LC50/4 h	4951 mg/l (RAT)

CAS: 64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>5000 mg/kg (RABBIT)
Inhalative	LC50/4 h	> 4951 mg/l (RAT)

CAS: 106-97-8 Butane, pure

Inhalative	LC50/4 h	658 mg/l (rat)
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CAS: 64742-82-1 Naphtha (petroleum), hydrodesulfurized heavy

Oral	LD50	>6500 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RABBIT)

CAS: 64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	LD50	>5000 mg/kg (RAT)
Dermal	LD50	>3000 mg/kg (RAT)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:** No further relevant information available.
- **Ingestion:** Risk of chemical pneumonia if the product reaches the lungs at vomiting or similar.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 64742-49-0 Naphtha (petroleum), hydrotreated light

EL50/48 h	>22-<46 mg/l (DAPHNIA MAGNA)
EL50/72 h	>1000 mg/l (ALGAE)

- **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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Dispose of as dangerous waste.

European waste catalogue

16 05 04*	gases in pressure containers (including halons) containing hazardous substances
HP 3	Flammable
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 14	Ecotoxic

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, RID, ADN, IMDG, IATA UN1950

14.2 UN proper shipping name

ADR/RID/ADN 1950 AEROSOLS
IMDG AEROSOLS
IATA AEROSOLS, flammable

14.3 Transport hazard class(es)

ADR/RID/ADN



Class 2 5F Gases.
Label 2.1

IMDG, IATA



Class 2.1
Label 2.1

14.4 Packing group

ADR, RID, ADN, IMDG, IATA Void

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Warning: Gases.
Danger code (Kemler): -
EMS Number: F-D, S-U
Stowage Code SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre:
Category A. For AEROSOLS with a capacity above 1 litre:

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- | | |
|--|---|
| <ul style="list-style-type: none"> · Segregation Code | <p>Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.</p> |
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | <p>Not applicable.</p> |
| <p>· Transport/Additional information:</p> | |
| <p>· ADR/RID/ADN</p> | |
| <ul style="list-style-type: none"> · Limited quantities (LQ) · Excepted quantities (EQ) | <p>1L
Code: E0
Not permitted as Excepted Quantity</p> |
| <ul style="list-style-type: none"> · Transport category · Tunnel restriction code | <p>2
D</p> |
| <p>· IMDG</p> | |
| <ul style="list-style-type: none"> · Limited quantities (LQ) · Excepted quantities (EQ) | <p>1L
Code: E0
Not permitted as Excepted Quantity</p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p>UN 1950 AEROSOLS, 2.1</p> |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Naphtha (petroleum), hydrotreated light
Naphtha (petroleum), hydrodesulfurized heavy
Naphtha (petroleum), hydrotreated heavy
Naphtha (petroleum), hydrotreated heavy
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P251 Pressurized container: Do not pierce or burn, even after use.

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P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P3a FLAMMABLE AEROSOLS**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	79.4

· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**

H220 Extremely flammable gas.

H226 Flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H372 Causes damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

· **Department issuing SDS:** Research & Development

· **Contact:** Kontakt: info@carlofon.de

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

PNEC: Predicted No-Effect Concentration (REACH)

SVHC: Substances of Very High Concern

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Flam. Gas 1: Flammable gases – Category 1

Aerosol 1: Aerosols – Category 1

Press. Gas C: Gases under pressure – Compressed gas

Flam. Liq. 3: Flammable liquids – Category 3

Skin Sens. 1B: Skin sensitisation – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**

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