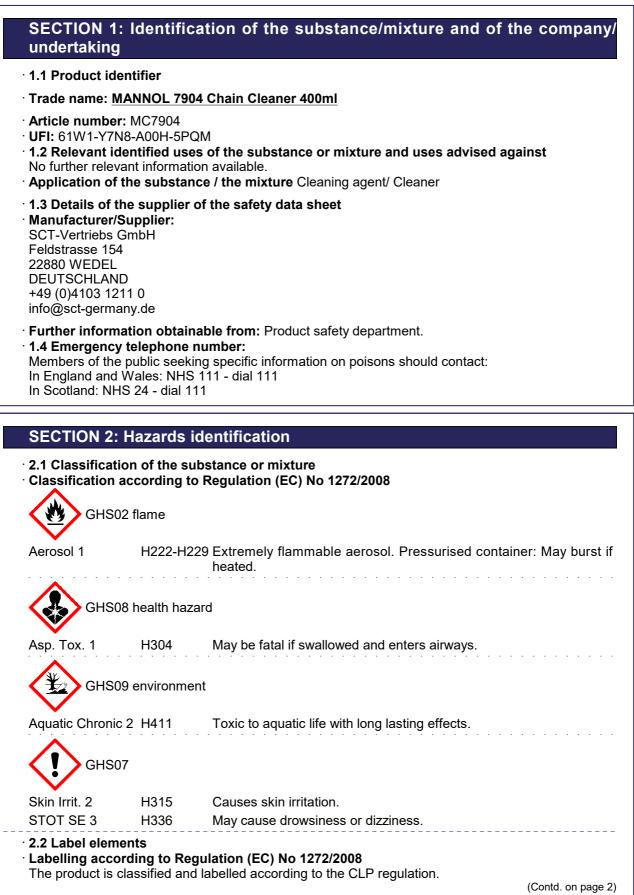


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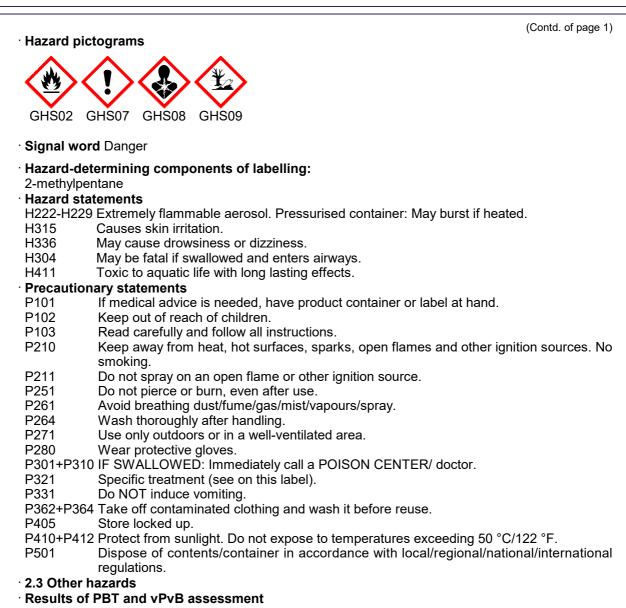
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· PBT: Not applicable.

• **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

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

| [·] Dangerous components: | | |
|------------------------------------|--|-----------------|
| CAS: 107-83-5 EINECS: 203-523-4 | 2-methylpentane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336 | 50-<69% |
| CAS: 74-98-6 EINECS: 200-827-9 | propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280 | 10–<18% |
| | butane, pure Flam. Gas 1A, H220; Press. Gas (Comp.), H280 | 1–<8% |
| <u> </u> | (Cor | ntd. on page 3) |



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1-5%

Trade name: MANNOL 7904 Chain Cleaner 400ml

CAS: 67-64-1 acetone

EINECS: 200-662-2 Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066

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
- · General information: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- 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. Do not use water.

Use fire extinguishing methods suitable to surrounding conditions. Foam

Fire-extinguishing powder

Sand

- · For safety reasons unsuitable extinguishing agents: Water
- 5.2 Special hazards arising from the substance or mixture
- No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.
- 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 Particular danger of slipping on leaked/spilled product. Wear protective clothing.
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 section 13. Ensure adequate ventilation.
6.4 Reference to other sections

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

• 7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.

- · Information about fire and explosion protection: Keep ignition sources away Do not smoke.
- · 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.

 \cdot 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

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

107-83-5 2-methylpentane (69.0%)

OEL Short-term value: 3600 mg/m³, 1000 ppm Long-term value: 1800 mg/m³, 500 ppm

74-98-6 propane (18.0%)

OEL Asphx

106-97-8 butane, pure (8.0%)

OEL Short-term value: 1000 ppm

67-64-1 acetone (5.0%)

OEL Long-term value: 1210 mg/m³, 500 ppm IOELV

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

· 8.2 Exposure controls

• Appropriate engineering controls No further data; see section 7.

- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- 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.
- · Hand protection



Protective gloves

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.

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

· 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/face protection Not required.

SECTION 9: Physical and chemical properties

| · 9.1 Information on basic physical and chemical properties | | |
|--|-----------------------------------|---|
| General Information | | |
| · Colour: | Clear | |
| Odour: | Characteristic | |
| Odour threshold: | Not determined. | |
| • Melting point/freezing point: | Undetermined. | |
| · Boiling point or initial boiling point and | | |
| boiling range | Not applicable, as aerosol. | |
| · Flammability | Not applicable. | |
| Lower and upper explosion limit | | |
| · Lower: | 0.5 Vol % | |
| · Upper: | 27.7 Vol % | |
| · Flash point: | Not applicable, as aerosol. | |
| • Decomposition temperature: | Not determined. | |
| · pH | Not determined. | |
| · Viscosity: | | |
| · Kinematic viscosity | Not determined. | |
| · Dynamic: | Not determined. | |
| · Solubility | | |
| · water: | Not miscible or difficult to mix. | |
| Partition coefficient n-octanol/water (log | | |
| value) | Not determined. | |
| Vapour pressure: | Not determined. | |
| Density and/or relative density | | |
| Density at 20 °C: | 0.665 g/cm³ | |
| · Relative density | Not determined. | |
| · Vapour density | Not determined. | |
| • 9.2 Other information | | 1 |
| · Appearance: | | |
| · Form: | Liquid | |
| Important information on protection of heal | | |
| and environment, and on safety. | | |
| · Ignition temperature: | Product is not selfigniting. | |
| Explosive properties: | Not determined. | |
| · Solvent content: | | |
| · Organic solvents: | 12-<35 % | |
| VOC (EC) | 62-<100 % | |
| · Solids content: | 0.0 % | |
| | (Contd. on page 6 | |



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|---|---|
| Change in condition | |
| Evaporation rate | Not applicable. |
| Information with regard to physical haz | ard |
| classes | |
| Explosives | Void |
| Flammable gases | Void |
| Aerosols | Extremely flammable aerosol. Pressurise |
| | container: May burst if heated. |
| Oxidising gases | Void |
| Gases under pressure | Void |
| Flammable liquids | Void |
| Flammable solids | Void |
| Self-reactive substances and mixtures | Void |
| Pyrophoric liquids | Void |
| Pyrophoric solids | Void |
| Self-heating substances and mixtures | Void |
| Substances and mixtures, which emit | |
| flammable gases in contact with water | Void |
| Oxidising liquids | Void |
| Oxidising solids | Void |
| Organic peroxides | Void |
| Corrosive to metals | Void |
| Desensitised explosives | Void |

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
- Aldehyde

Poisonous gases/vapours Carbon dioxide

SECTION 11: Toxicological information

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

• Acute toxicity Based on available data, the classification criteria are not met.

| | | 658 mg/l (rat) | | |
|-----------------|------|-----------------------|--|--|
| 67-64-1 acetone | | | | |
| Oral L | _D50 | 5,800 mg/kg (rat) | | |
| Dermal L | _D50 | 20,000 mg/kg (rabbit) | | |



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- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- \cdot Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- \cdot 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 Based on available data, the classification criteria are not met.
- Aspiration hazard

May be fatal if swallowed and enters airways.

- · 11.2 Information on other hazards
- · Endocrine disrupting properties
- None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

- Aquatic toxicity: No further relevant information available.
- **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.
- 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- 12.6 Endocrine disrupting properties
- The product does not contain substances with endocrine disrupting properties.
- · 12.7 Other adverse effects
- · Remark: Toxic for 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.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

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.

| · Europ | · European waste catalogue | | |
|---------|---|--|--|
| HP3 | Flammable | | |
| HP4 | Irritant - skin irritation and eye damage | | |
| HP5 | Specific Target Organ Toxicity (STOT)/Aspiration Toxicity | | |
| HP14 | Ecotoxic | | |
| | | | |

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· Uncleaned packaging:

• Recommendation: Disposal must be made according to official regulations.

| SECTION 14: Transport information | |
|--|--|
| · 14.1 UN number or ID number · ADR, IMDG, IATA | UN1950 |
| 14.2 UN proper shipping name ADR | 1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS |
| ·IMDG | AEROSOLS (2-methylpentane), MARINE POLLUTANT |
| | AEROSOLS |
| 14.3 Transport hazard class(es) | |
| · ADR | |
| · Class · Label | 2 5F Gases. 2.1 |
| ·IMDG | |
| | |
| · Class · Label | 2 Gases. 2.1 |
| | |
| · Class · Label | 2 Gases. 2.1 |
| · 14.4 Packing group · ADR, IMDG, IATA | not regulated |
| · 14.5 Environmental hazards: | Product contains environmentally hazardous substances: 2-methylpentane |
| Marine pollutant: Special marking (ADR): | Symbol (fish and tree) Symbol (fish and tree) |
| 14.6 Special precautions for user Hazard identification number (Kemler code) EMS Number: | Warning: Gases. : - F-D,S-U |
| | (Contd. on page 9 |
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| de name: | MANNOL | 7904 (| Chain (| Cleaner | 400ml |
|----------|--------|--------|---------|---------|-------|

| | (Contd. of page 8 |
|--|--|
| • 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: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. SG69 For AEROSOLS with a maximum capacity |
| Segregation code | 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. |
| 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| Transport/Additional information: | |
| ADR · Limited quantities (LQ) · Excepted quantities (EQ) | 1L Code: E0 Not permitted as Excepted Quantity |
| Transport category Tunnel restriction code | 3 E |
| · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | 1L Code: E0 Not permitted as Excepted Quantity |
| · UN "Model Regulation": | UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS |

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- Seveso category
- P3a FLAMMABLE AEROSOLS
- E2 Hazardous to the Aquatic Environment
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · 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.

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Annex II - REPORTABLE EXPLOSIVES PRECURSORS

67-64-1 acetone

Regulation (EC) No 273/2004 on drug precursors

67-64-1 acetone

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

67-64-1 acetone

· 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.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- Causes serious eye irritation. H319
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

- · Department issuing SDS: Product safety department.
- Date of previous version: 25.05.2023
- Version number of previous version: 2305
- · 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)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1A: Flammable gases Category 1A
- Aerosol 1: Aerosols Category 1 Press. Gas (Comp.): Gases under pressure Compressed gas
- Flam. Liq. 2: Flammable liquids Category 2
- Skin Irrit. 2: Skin corrosion/irritation Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) Category 3
- Asp. Tox. 1: Aspiration hazard Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment long-term aquatic hazard Category 2
- ** Data compared to the previous version altered.

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