

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 26.04.2016

Version 1

Revision: 26.04.2016

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

- **1.1 Product identifier**
- **Trade name:** **OTTO Cleaner C**
- **Application of the substance / the mixture** *Cleaning agent/ Cleaner*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Hermann Otto GmbH  
 Krankenhausstraße 14  
 D-83413 Fridolfing  
 Tel.: 0049/(0)8684/908-0  
 Fax.: 0049/(0)8684/908-539*
- **Further information obtainable from:**  
*Tel.: 0049- (0)8684- 908- 641 ( -460 )  
 E-Mail: alois.parzinger@otto-chemie.de*
- **1.4 Emergency telephone number:** *Tel.: 0049- (0)89- 192 40 (emergency telephone no.)*

### SECTION 2: Hazards identification

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



GHS02 flame

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



GHS08 health hazard

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



GHS09 environment

*Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.*



GHS07

*Skin Irrit. 2            H315 Causes skin irritation.*

*STOT SE 3            H336 May cause drowsiness or dizziness.*

- **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, GHS09*
- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane*
- **Hazard statements**  
*H225 Highly flammable liquid and vapour.  
 H315 Causes skin irritation.  
 H336 May cause drowsiness or dizziness.  
 H304 May be fatal if swallowed and enters airways.  
 H411 Toxic to aquatic life with long lasting effects.*
- **Precautionary statements**  
*P102                    Keep out of reach of children.*

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- P271 Use only outdoors or in a well-ventilated area.  
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P280 Wear protective gloves / eye protection / face protection.  
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/-  
 P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P313 Get medical advice/attention.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Solvent mixture with additives.
- **Dangerous components:**

EC number: 921-024-6	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	80 - 100%
	<ul style="list-style-type: none"> <li>⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336</li> </ul>	
CAS: 110-82-7	cyclohexane	< 10%
EINECS: 203-806-2	<ul style="list-style-type: none"> <li>⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336</li> </ul>	
CAS: 110-54-3	n-hexane	< 2.5%
EINECS: 203-777-6	<ul style="list-style-type: none"> <li>⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336</li> </ul>	

- **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.  
 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.
- **After skin contact**  
 Immediately wash with water and soap and rinse thoroughly.  
 If skin irritation continues, consult a doctor.
- **After eye contact**  
 Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**  
 Do not induce vomiting; call for medical help immediately. Show container or label.  
 A person vomiting while laying on their back should be turned onto their side.
- **4.2 Most important symptoms and effects, both acute and delayed**  
 Headache  
 Disziness

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Disziness

Nausea

- **4.3 Indication of any immediate medical attention and special treatment needed**  
If swallowed or in case of vomiting, danger of entering the lungs

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered receptacles with water spray.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections** See Section 8 for information on personal protection equipment.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
see item 8: Personal protective equipment
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Traces of flammable substances may collect in the steam chamber of enclosed systems. Keep clear of ignition sources.  
Highly volatile, flammable constituents are released during processing.  
Flammable gas-air mixtures may form in empty receptacles.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Provide solvent resistant, sealed floor.  
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.  
Store receptacle in a well ventilated area.

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### 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:**

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- 110-82-7 cyclohexane (< 10%)**  
   WEL Short-term value: 1050 mg/m<sup>3</sup>, 300 ppm  
   Long-term value: 350 mg/m<sup>3</sup>, 100 ppm
- 110-54-3 n-hexane (< 2.5%)**  
   WEL Long-term value: 72 mg/m<sup>3</sup>, 20 ppm
- **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.  
   Wash hands before breaks and at the end of work.  
   Avoid contact with the eyes and skin.  
   Pregnant women should strictly avoid inhalation or skin contact.
- **Respiratory protection:**  
   Use suitable respiratory protective device when high concentrations are present.
- **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.  
   Fluorocarbon rubber (Viton)  
   Recommended thickness of the material: ≥ 0.4 mm
- **Penetration time of glove material** Breakthrough time: > 30 min
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

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

Form:	Fluid
Colour:	Colourless
Odour:	Petrol-like
Odour threshold:	Not determined.

- **Change in condition**

Melting point/Melting range:	< -20 °C
Boiling point/Boiling range:	60 - 120 °C

- **Flash point:** < 0 °C
- **Ignition temperature:** ≥ 200 °C
- **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:	8 Vol %

- **Density at 20 °C:** 0.7 g/cm<sup>3</sup>
- **Relative density** Not determined.

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- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity at 40 °C:** 0.49 mm<sup>2</sup>/s (kinematisch)
- **9.2 Other information** No further relevant information available.

### 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.  
Avoid strong heating.
- **10.3 Possibility of hazardous reactions**  
Danger of receptacles bursting because of high vapour pressure when heated  
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised
- **10.5 Incompatible materials:** Strong oxidizing agents, alkalis, amines, strong acids
- **10.6 Hazardous decomposition products:** see item 5.2

### 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:**
- 
- Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane**
- Oral LD50 > 5000 mg/kg (rat) (OECD-Prüfrichtlinie 401)
- Dermal LD50 > 2000 mg/kg (rat) (OECD-Rpüfrichtlinie 402)
- Inhalative LC50/4 h > 20 mg/l (rat) (OECD-Prüfrichtlinie 403)
- 110-82-7 cyclohexane**
- Oral LD50 12705 mg/kg (rat)
- **Primary irritant effect:**
  - **Skin corrosion/irritation**  
Causes skin irritation.
  - **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.
  - **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** Based on available data, the classification criteria are not met.
  - **Aspiration hazard**  
May be fatal if swallowed and enters airways.

### SECTION 12: Ecological information

- **Ecotoxicological effects:**
- **Remark:** Toxic for fish

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- **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.  
 Also poisonous for fish and plankton in water bodies.  
 The material is harmful to the environment.  
 Toxic for aquatic organisms*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** *Liquid residues must be specially treated adhering to official regulations.*
- **Uncleaned packaging:**
- **Recommendation:**  
*Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.  
 Packagings that may not be cleansed are to be disposed of in the same manner as the product.*

### SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA**
- **14.2 UN proper shipping name**
- **ADR**
- **IMDG**
- **IATA**
- **14.3 Transport hazard class(es)**
- **ADR**
- 

- **Class**
- **Label**
- **IMDG**
- 

- **Class**

UN1993

1993 FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, CYCLOHEXANE), ENVIRONMENTALLY HAZARDOUS

FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, CYCLOHEXANE), MARINE POLLUTANT

Flammable liquid, n.o.s. (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, Cyclohexane)

3 (F1) Flammable liquids.

3

3 Flammable liquids.

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<ul style="list-style-type: none"> <li>· <b>Label</b></li> </ul>	3
<hr style="border-top: 1px dashed black;"/>	
<ul style="list-style-type: none"> <li>· <b>IATA</b></li> </ul>	
	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> <li>· <b>14.5 Environmental hazards:</b></li> </ul>	3 Flammable liquids. 3 II Product contains environmentally hazardous substances: cyclohexane, Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
<ul style="list-style-type: none"> <li>· <b>Marine pollutant:</b></li> </ul>	Yes Symbol (fish and tree)
<ul style="list-style-type: none"> <li>· <b>Special marking (ADR):</b></li> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	Symbol (fish and tree) Warning: Flammable liquids. 33 F-E, S-E
<ul style="list-style-type: none"> <li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	Not applicable.
<hr style="border-top: 1px dashed black;"/>	
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	
<hr style="border-top: 1px dashed black;"/>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>	2 D/E
<hr style="border-top: 1px dashed black;"/>	
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	UN1993, FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane, CYCLOHEXANE), ENVIRONMENTALLY HAZARDOUS, 3, II

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations**
- **Information about limitation of use:**  
 Employment restrictions concerning pregnant and lactating women must be observed.  
 Employment restrictions concerning juveniles must be observed.
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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- **Details of international registration status:**

- Listed on or in accordance with the following inventories:**

EINECS - Europe	listed
AICS - Australia	listed
DSL/NDSL - Canada	listed
IECSC - China	listed
ENCS - Japan	listed
NZIoC - New Zealand	not listed
PICCS - Philippines	listed
ECL/KECI - Korea	listed
TSCA - USA	listed
NECI - Taiwan	listed

- **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**

H225 Highly flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H336 May cause drowsiness or dizziness.  
 H361f Suspected of damaging fertility.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H411 Toxic to aquatic life with long lasting effects.

- **Department issuing MSDS:** Tel.: 0049- (0)8684- 908- 641

- **Contact:** Tel.: 0049- (0)8684- 908- 641 ( -460 )

- **Abbreviations and acronyms:**

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)  
 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, Hazard Category 2  
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
 Repr. 2: Reproductive toxicity, Hazard Category 2  
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
 STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2  
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1  
 Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1  
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

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

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