Product information CC 4 (cleaner - oil)

Use
CC 4 reconditioning agent is a highly effective reconditioning treatment to remove oil, grease and organic fouling.

Features
The surface active ingredients are in accordance to the EC regulation No. 648/2004 of the European detergent regulation.
- Compatible with most construction materials
- Safe handling
- Increased equipment life-time
- Reconditioned equipment requires less water and energy, thus reducing emissions of harmful greenhouse gases.

Benefits
Weitere Hinweise sind dem Sicherheitsdatenblatt zu entnehmen.

Dosing
CC 4 can be applied as a 0.5-10% water solution, depending upon the characteristics and severity of the scale or fouling to be removed. By applying a correct temperature, agitation and contact time, the dosages of the reconditioning agent can be optimized. In case of foaming please use the defoaming agent ES 1.

<table>
<thead>
<tr>
<th>Oil / application</th>
<th>temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25°C</td>
</tr>
<tr>
<td>Lubricating oil</td>
<td></td>
</tr>
<tr>
<td>Mineral oil</td>
<td></td>
</tr>
<tr>
<td>Maschine oil</td>
<td></td>
</tr>
<tr>
<td>Synthetic</td>
<td></td>
</tr>
<tr>
<td>Base oil</td>
<td>x</td>
</tr>
<tr>
<td>Hydraulic oil</td>
<td>x</td>
</tr>
<tr>
<td>Mineral oil</td>
<td>x</td>
</tr>
<tr>
<td>Synthetic</td>
<td>x</td>
</tr>
<tr>
<td>Cooling lubricant</td>
<td></td>
</tr>
<tr>
<td>Highly refined mineral oil</td>
<td>x</td>
</tr>
<tr>
<td>Corrosion inhibitor wax</td>
<td>x</td>
</tr>
</tbody>
</table>

Handling precautions
gwk maintains Material Safety Data Sheets on all of its chemical products. Material Safety Data Sheets contain health and safety information relevant for your development of appropriate product handling procedures to protect your employees and customers. Our Material Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using gwk products in your facilities.

Disposal handling
The environmental impact depends on what has to be cleaned. The used reconditioning solution may be classified as environmentally hazardous waste. Such waste must be managed in accordance with official requirements for the type of waste in question. The product itself does not constitute environmentally hazardous waste, and as such reduces the amount of waste handling and optimizes the overall disposal cost.

Important Information
Typical Properties: Refer to MSDS.

Regulatory Information: Please refer to the MSDS or contact your sales representative for any additional regulatory and environmental information.

Shelf life
2 years in originally sealed containers.
6 months in opened containers.
Storage conditions: cool (5°C – 20°C), frost-free, dark and dry.

Packaging
CC 4 is packed in 10 kg and 25 kg pails and 200 kg drums.

All statements, information and data presented herein are believed to be accurate and reliable but are not to be taken as a guarantee, express warranty or implied warranty of merchantability of fitness for a particular purpose, or representation, express or implied, for which seller assumes legal responsibility, and they are offered solely for your consideration, investigation and verification. Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.
Conforms to EU Regulation 1907/2006/EC as amended. - SDSGHS_DE

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

1.1 Product identifier
Trade name : cc 4

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the Substance/Mixture : Cleaner.

1.3 Details of the supplier of the safety data sheet
gwk Gesellschaft Wärme Kältetechnik mbH
Scherl 10
D-58540 Meinerzhagen
Deutschland

info@gwk.com

1.4 Emergency telephone number
emergency telephone number
Berlin +49 (0) 30 30686700

Product Information
Contact your local gwk representative

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

| Serious eye damage, Category 1 | H318: Causes serious eye damage. |

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>Danger</td>
</tr>
<tr>
<td>Hazard statements</td>
<td>H318 Causes serious eye damage.</td>
</tr>
<tr>
<td>Precautionary</td>
<td>Prevention:</td>
</tr>
<tr>
<td>statements</td>
<td>P280 Wear eye protection/ face protection.</td>
</tr>
</tbody>
</table>
Response:  
P305 + P351 + P338 + P310  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:  
C9-11 alcohol polyethylene oxide  
Poly(oxy-1,2-ethanediyl), a-(2-propylheptyl)-w-hydroxy-

2.3 Other hazards  
Additional advice  
No information available.

SECTION 3: Composition/information on ingredients  
3.2 Mixtures

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C9-11 alcohol polyethoxylate</td>
<td>68439-46-3</td>
<td></td>
<td></td>
<td>Acute Tox.4; H302 Eye Dam.1; H318</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), a-(2-propylheptyl)-w-hydroxy-</td>
<td>160875-66-1</td>
<td></td>
<td></td>
<td>Acute Tox.4; H302 Skin Irrit.2; H315 Eye Dam.1; H318 Eye Dam.1; H318</td>
<td>&gt;= 1 - &lt; 2,5</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

SECTION 4: First aid measures  
4.1 Description of first aid measures  
General advice  
: Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.

If inhaled  
: If breathed in, move person into fresh air.  
If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact  
: Remove contaminated clothing. If irritation develops, get
medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.

In case of eye contact:
- In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Continue rinsing eyes during transport to hospital.
- Remove contact lenses.
- Protect unharmed eye.

If swallowed:
- Obtain medical attention.
- Do NOT induce vomiting.
- Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms:
- Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
  - stomach or intestinal upset (nausea, vomiting, diarrhea)
  - irritation (nose, throat, airways)

Risks:
- Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment:
- No hazards which require special first aid measures.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Water spray
- Foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media:
- High volume water jet

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting:
- Do not allow run-off from fire fighting to enter drains or water courses.
5.3 Advice for firefighters

<table>
<thead>
<tr>
<th>Special protective equipment for firefighters</th>
<th>In the event of fire, wear self-contained breathing apparatus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific extinguishing methods</td>
<td>Product is compatible with standard fire-fighting agents.</td>
</tr>
<tr>
<td>Further information</td>
<td>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.</td>
</tr>
</tbody>
</table>

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| Personal precautions | Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Comply with all applicable federal, state, and local regulations. |

6.2 Environmental precautions

| Environmental precautions | Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |

6.3 Methods and material for containment and cleaning up

| Methods for cleaning up | Keep in suitable, closed containers for disposal. |

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

| Advice on safe handling | Do not breathe vapours/dust. Container hazardous when empty. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations. |
Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Hygiene measures: Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Storage class (TRGS 510): 12, Non Combustible Liquids

Other data: No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s): No data available

---

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Eye protection: Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist. Maintain eye wash station in immediate work area.

Hand protection

Remarks: Nitrile rubber butyl-rubber

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection: Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Aqueous solution
Colour : yellow
Odour : No data available
Odour Threshold : No data available
pH : ca. 5.4, (20 °C)
Melting point/freezing point : Not applicable
Boiling point/boiling range : 100 °C
(1.013,333333 hPa)
Calculated Phase Transition Liquid/Gas
Flash point : Not applicable
Evaporation rate : No data available
Flammability (solid, gas) : No data available
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : 23,333333 hPa (20 °C)
Calculated Vapor Pressure
Relative vapour density : No data available
Relative density : 1 (20 °C)
Density : 1 g/cm3 (20 °C)
Solubility(ies)
Water solubility : completely soluble
Solubility in other solvents : No data available
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 9.2 Other information
No data available

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity
No decomposition if stored and applied as directed.

#### 10.2 Chemical stability
Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions
Hazardous reactions: Product will not undergo hazardous polymerization.

#### 10.4 Conditions to avoid
Conditions to avoid: Exposure to moisture

#### 10.5 Incompatible materials
Materials to avoid:
- aluminum
- Copper
- Copper alloys
- Strong bases
- Strong oxidizing agents
Do not use with aluminum equipment at temperatures above 49C or 120 degrees F.

#### 10.6 Hazardous decomposition products
Hazardous decomposition products: carbon dioxide and carbon monoxide
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure:
- Inhalation
- Skin contact
- Eye Contact
- Ingestion

**Acute toxicity**
Not classified based on available information.

**Components:**

**ALCOHOLS, C9-11, ETHOXYLATED:**
- Acute oral toxicity: LD 50 (Rat): 500 - 2,000 mg/kg
- Acute dermal toxicity: LD 50 (Rabbit): > 5 g/kg

**Skin corrosion/irritation**
Not classified based on available information.

**Components:**

**ALCOHOLS, C9-11, ETHOXYLATED:**
Result: Mild to Moderately Irritating

**POLYMER:**
Species: Rabbit
Method: OECD Test Guideline 404
Result: Irritating to skin

**Serious eye damage/eye irritation**
Causes serious eye damage.

**Product:**
Remarks: May cause irreversible eye damage.

**Components:**

**ALCOHOLS, C9-11, ETHOXYLATED:**
Result: Corrosive to eyes

**POLYMER:**
Species: Rabbit
Method: OECD Test Guideline 405
Result: Corrosive to eyes

**Respiratory or skin sensitisation**
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration hazard**
Not classified based on available information.

**Further information**

**Product:**
Remarks: No data available

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Components:**
C9-11 alcohol polyethoxylate

**Toxicity to fish**
LC50 (Fathead minnow (Pimephales promelas)): 8.5 - 17 mg/l
Exposure time: 96 h
Test Type: Renewal

**Toxicity to daphnia and other aquatic invertebrates**
EC50 (Water flea (Daphnia magna)): 2.9 - 8.5 mg/l
Exposure time: 48 h
Test Type: semi-static test

#### 12.2 Persistence and degradability

**Components:**
C9-11 alcohol polyethoxylate

**Biodegradability**
Result: Readily biodegradable

Remarks: This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.
12.3 Bioaccumulative potential

**Product:**
Bioaccumulation : Remarks: The bioaccumulation potential cannot be determined.

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not relevant

12.6 Other adverse effects

**Product:**
Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product**
: The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

**Contaminated packaging**
: Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

**ADR:** Not dangerous goods
**ADNR:** Not dangerous goods
**RID:** Not dangerous goods
**INTERNATIONAL MARITIME DANGEROUS GOODS:** Not dangerous goods
**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:** Not dangerous goods
**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:** Not dangerous goods

14.2 UN proper shipping name
ADR: Not dangerous goods  
ADNR: Not dangerous goods  
RID: Not dangerous goods  
INTERNATIONAL MARITIME DANGEROUS GOODS: Not dangerous goods  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Not dangerous goods  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Not dangerous goods  

14.3 Transport hazard class(es)  
ADR: Not dangerous goods  
ADNR: Not dangerous goods  
RID: Not dangerous goods  
INTERNATIONAL MARITIME DANGEROUS GOODS: Not dangerous goods  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Not dangerous goods  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Not dangerous goods  

14.4 Packing group  
ADR: Not dangerous goods  
ADNR: Not dangerous goods  
RID: Not dangerous goods  
INTERNATIONAL MARITIME DANGEROUS GOODS: Not dangerous goods  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Not dangerous goods  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Not dangerous goods  

14.5 Environmental hazards  
ADR: Not applicable  
ADNR: Not applicable  
RID: Not applicable  
INTERNATIONAL MARITIME DANGEROUS GOODS: Not applicable  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Not applicable  
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Not applicable  

14.6 Special precautions for user  
Not applicable  

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code  
Ship Type: Not applicable  
Pollutant: Not applicable  
Category: Not applicable  

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 57): Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable


Water contaminating class (Germany): WGK 2 water endangering

TA Luft List (Germany): Total dust, Not applicable

: Inorganic substances in powdered form, Not applicable

: Inorganic substances in vapour or gaseous form, Not applicable

: Organic Substances, Class 1 < 0.01 %

: Carcinogenic substances, Not applicable

: Mutagenic, Not applicable

: Toxic to reproduction, Not applicable

The components of this product are reported in the following inventories:

TSCA: On TSCA Inventory

DSL: This product contains one or more components that are not on the Canadian DSL and have annual quantity limits.

AUSTR: Not in compliance with the inventory
Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

15.2 Chemical safety assessment
No data available

SECTION 16: Other information

Further information
Revision Date: 13.07.2016

Full text of H-Statements referred to under section 3.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Further information
Other information: The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Sources of key data used to compile the Safety Data Sheet
Key literature references and sources of data
SOLENIS Internal data
SOLENIS internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet:
ACGIH: American Conference of Industrial Hygienists
BEI: Biological Exposure Index
Safety data sheet

Revision date: 13.07.2016
Print date: 29.01.2018

Version: 2.0

CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).
ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent, Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

ABM : Water Hazard Class for the Netherlands
ADR : Agreement concerning the International Carriage of Dangerous Goods by Road.
ADNR : Regulation for the Carriage of Dangerous Substances on the Rhine
CLP : Classification, Labelling and Packaging
CSA : Chemical Safety Assessment
CSR : Chemical Safety Report
DNEL : Derived No Effect Level.
EINECS : European Inventory of Existing Commercial Chemical Substances.
ELINCS : European List of Notified Chemical Substances
PEC : Predicted Effect Concentration
PEL : Permissible Exposure Limits
PNEC : Predicted No Effect Concentration
REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
RID : Regulation Concerning the International Transport of Dangerous Goods by Rail
WGK : German Water Hazard Class