

# KÄRCHER RM 99 SOLAR PANEL CLEANER

## Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)  
Issue date: 9/21/2021 Revision date: 5/14/2025 Supersedes: 5/14/2025 Version: 2.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product code : 1937KNA

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Cleansing product

#### 1.3. Supplier

KARCHER NORTH AMERICA  
6398 N Karcher Way  
Aurora, 80019  
United States  
T 303-738-2400  
[info@karcher.com](mailto:info@karcher.com)

#### 1.4. Emergency telephone number

Emergency number : 800-535-5053  
For Chemical Emergency Call INFOTRAC 24hr/day 7days/week  
Within USA and Canada: 1-800-535-5053  
Outside USA and Canada: 1-352-323-3500  
(collect calls accepted)

### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment — Acute Hazard, Category 3	H402	Harmful to aquatic life.

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage  
H373 - May cause damage to organs through prolonged or repeated exposure  
H402 - Harmful to aquatic life

Precautionary statements (GHS US) : P260 - Do not breathe dusts or mists.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

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P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.  
P310 - Immediately call a poison center/doctor.  
P314 - Get medical advice or attention if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P363 - Take off immediately all contaminated clothing and wash it before reuse.  
P405 - Store locked up.  
P501 - Dispose of hazardous or special waste collection point, in accordance with local regulations to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : None under normal conditions.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
BUTOXYDIGLYCOL Component	CAS-No.: 112-34-5	1 – 5
ISOPROPANOL	CAS-No.: 67-63-0	1 – 5
ETHYL HEXANOL ETHOXYLATED PROPOXYLATED-NON IONIC SURFACTANT-6	CAS-No.: 64366-70-7	1 – 5
DECYLAMINE OXIDE	CAS-No.: 2605-79-0	1 – 5

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.  
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : None under normal conditions.  
Symptoms/effects after skin contact : Burns.  
Symptoms/effects after eye contact : Serious damage to eyes.  
Symptoms/effects after ingestion : Burns.

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### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Reactivity in case of fire	: In case of fire: possible release of toxic/corrosive gases/vapours.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Eliminate all ignition sources if safe to do so. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

General measures	: Remove ignition sources. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed	: Keep away from any possible contact with water, because of violent reaction and possible flash fire.
Precautions for safe handling	: Ensure good ventilation of the work station. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store locked up.
Packaging materials	: Store always product in container of same material as original container.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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No additional information available

##### BUTOXYDIGLYCOL 112-34-5

No additional information available

##### USA - ACGIH - Occupational Exposure Limits

Local name	Diethylene glycol monobutyl ether
ACGIH OEL TWA	10 ppm (Inhalable fraction and vapor)
Remark (ACGIH)	TLV® Basis: Hematologic, liver & kidney eff
Regulatory reference	ACGIH 2019

##### ISOPROPANOL 67-63-0

No additional information available

##### USA - ACGIH - Occupational Exposure Limits

Local name	2-Propanol
ACGIH OEL TWA	200 ppm
ACGIH OEL STEL	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2019

##### USA - OSHA - Occupational Exposure Limits

Local name	Isopropyl alcohol
OSHA PEL TWA	980 mg/m³ 400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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### DECYLAMINE OXIDE 2605-79-0

No additional information available

### ETHYL HEXANOL ETHOXYLATED PROPOXYLATED-NON IONIC SURFACTANT-6 64366-70-7

No additional information available

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

## 8.3. Individual protection measures/Personal protective equipment

### Personal protective equipment:

Wear recommended personal protective equipment.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Light yellow
Odor	: Characteristic odour
Odor threshold	: No data available
pH	: 11.9
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available

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Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

BUTOXYDIGLYCOL (112-34-5)	
LD50 dermal rabbit	2764 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE US (oral)	2410 mg/kg body weight
ATE US (dermal)	2764 mg/kg body weight
ISOPROPANOL (67-63-0)	
LD50 oral rat	5840 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	12882 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Converted value, Dermal, 14 day(s))

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ISOPROPANOL (67-63-0)	
LC50 Inhalation - Rat [ppm]	> 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	5840 mg/kg body weight
ATE US (dermal)	12882 mg/kg body weight
DECYLAMINE OXIDE (2605-79-0)	
LD50 oral rat	300 – 2000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
ATE US (oral)	300 mg/kg body weight
Skin corrosion/irritation	: Causes severe skin burns. pH: 11.9
Serious eye damage/irritation	: Causes serious eye damage. pH: 11.9
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
ISOPROPANOL (67-63-0)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
ISOPROPANOL (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
BUTOXYDIGLYCOL (112-34-5)	
NOAEL (oral,rat,90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
DECYLAMINE OXIDE (2605-79-0)	
NOAEL (oral,rat,90 days)	40 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Harmful to aquatic life.

##### BUTOXYDIGLYCOL112-34-5

LC50 - Fish [1]	1300 mg/l (Equivalent or similar to OECD 203, 96 h, <i>Lepomis macrochirus</i> , Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 100 mg/l (EU Method C.2, 48 h, <i>Daphnia magna</i> , Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, <i>Desmodesmus subspicatus</i> , Static system, Fresh water, Experimental value, Nominal concentration)

##### ISOPROPANOL 67-63-0

LC50 - Fish [1]	9640 – 10000 mg/l (Equivalent or similar to OECD 203, 96 h, <i>Pimephales promelas</i> , Flow-through system, Fresh water, Experimental value, Lethal)
LC50 - Fish [2]	9640 mg/l Test organisms (species): <i>Pimephales promelas</i>

##### DECYLAMINE OXIDE2605-79-0

LC50 - Fish [1]	134 mg/l Test organisms (species): <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i> )
EC50 - Crustacea [1]	10.4 mg/l Test organisms (species): <i>Daphnia magna</i>
LC50 - Fish [2]	31.8 mg/l Test organisms (species): <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i> )
EC50 - Crustacea [2]	3.1 mg/l Test organisms (species): <i>Daphnia magna</i>
NOEC (chronic)	0.7 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC chronic fish	0.42 mg/l Test organisms (species): <i>Pimephales promelas</i> Duration: '302 d'

#### 12.2. Persistence and degradability

##### BUTOXYDIGLYCOL112-34-5

Persistence and degradability	Readily biodegradable in water.
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##### ISOPROPANOL 67-63-0

Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.19 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.23 g O <sub>2</sub> /g substance
ThOD	2.4 g O <sub>2</sub> /g substance

#### 12.3. Bioaccumulative potential

##### BUTOXYDIGLYCOL112-34-5

Partition coefficient n-octanol/water (Log Pow)	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

##### ISOPROPANOL 67-63-0

Partition coefficient n-octanol/water (Log Pow)	0.05 (Weight of evidence approach, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).



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### 12.4. Mobility in soil

#### BUTOXYDIGLYCOL 112-34-5

Surface tension	27 mN/m (25 °C, 0.00212 mol/g)
Ecology - soil	Highly mobile in soil.

#### ISOPROPANOL 67-63-0

Surface tension	No data available (test not performed)
Ecology - soil	Highly mobile in soil.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

## SECTION 14: Transport information

### 14.1. UN number

UN-No. (DOT) : UN1219

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Isopropanol

### 14.3. Transport hazard class(es)

**DOT**  
Transport hazard class(es) (DOT) : 3  
Hazard labels (DOT) : 3



### 14.4. Packing group

Packing group (DOT) : II

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

**DOT**  
UN-No. (DOT) : UN1219

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DOT Special Provisions (49 CFR 172.102)	: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 4b;150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

ISOPROPYL ALCOHOL	CAS-No. 67-63-0	1 – 5%
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### 15.2. International regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 5/14/2025

### Full text of hazard classes and H-statements

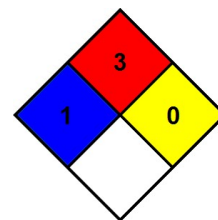
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life

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- |                    |   |
|--------------------|---|
| NFPA health hazard | : 1 - Materials that, under emergency conditions, can cause significant irritation.   |
| NFPA fire hazard   | : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. |
| NFPA reactivity    | : 0 - Material that in themselves are normally stable, even under fire conditions.  |



- |                     |   |
|---------------------|---|
| Hazard Rating       |   |
| Health              | : 1 Slight Hazard - Irritation or minor reversible injury possible  |
| Flammability        | : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC) |
| Physical            | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.   |
| Personal protection | : B - Safety glasses, Gloves  |

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.