



Safety Data Sheet

according to Regulation (EC) No 1907/2006

POWER steamer descaler**1845 0100**

Revision date: 08.08.2022

Product code: 18450100_NZL_IV

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

1.1. Product identifier

POWER steamer descaler 1845 0100

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Descaling solution

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: Renfert GmbH
Street: Untere Giesswiesen 2
Place: D-78247 Hilzingen
Telephone: +49 7731 8208-0
e-mail: info@renfert.com
Internet: www.renfert.com

Telefax: +49 7731 8208-70

Supplier

Company name: Ivoclar Vivadent Ltd
New Zealand
Street: 12 Omega St
Place: GB- Rosedale, Auckland
Telephone: +64 9 914 9999
Internet: www.ivoclarvivadent.co.nz

Telefax: +64 9 914 9990

1.4. Emergency telephone number:

0800 764 766 (National Poison Centre)
Poisons Hotline (24 hours / 7 days)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute Tox. 4; H332
Skin Corr. 1B; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

formic acid

Signal word:

Danger

Pictograms:



Hazard statements

H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.

Precautionary statements

P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

Special labelling of certain mixtures

EUH071 Corrosive to the respiratory tract.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.



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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization
DESCALERS

Hazardous components

| CAS No | Chemical name | Quantity | | |
|---------|---|--------------|------------------|--|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 64-18-6 | formic acid | 15 - < 20 % | | |
| | 200-579-1 | 607-001-00-0 | 01-2119491174-37 | |
| | Flam. Liq. 3, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1; H226 H331 H302 H314 H318 | | | |

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity | |
|---------|---|---------------|-------------|--|
| | Specific Conc. Limits, M-factors and ATE | | | |
| 64-18-6 | 200-579-1 | formic acid | 15 - < 20 % | |
| | inhalation: LC50 = 7,85 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 730 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 10 - < 90 Skin Irrit. 2; H315: >= 2 - < 10 Eye Irrit. 2; H319: >= 2 - < 10 | | | |

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off contaminated clothing and wash it before reuse.

After inhalation

Provide fresh air. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

After contact with skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

In case of skin irritation, consult a physician.

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

After ingestion

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to the escape of irritating gases and vapours.

5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Use personal protection equipment.

Provide adequate ventilation.

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6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Avoid contact with eyes and skin. Handle and open container with care. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Avoid contact with skin, eyes and clothes. Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep only in the original container in a cool, well-ventilated place.

Unsuitable container/equipment material: Zinc, Aluminium, Light metal

Hints on joint storage

Do not store together with: alkalines

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place.

storage temperature: 5°C - 40°C

7.3. Specific end use(s)Please refer to our internet website for more information. www.renfert.com

To avoid risks to human health and the environment, comply with the instructions for use.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

| CAS No | Substance | ppm | mg/m ³ | fib/cm ³ | Category | Origin |
|---------|-------------|-----|-------------------|---------------------|-----------|--------|
| 64-18-6 | Formic acid | 5 | 9 | | TWA (8 h) | |

8.2. Exposure controls**Appropriate engineering controls**

See section 7. No additional measures necessary.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. (EN ISO 374)

Tested protective gloves must be worn

Suitable material: CR (polychloroprene, chloroprene rubber) Butyl caoutchouc (butyl rubber) FKM (fluoro rubber)

Thickness of the glove material 0,5 mm

Breakthrough time: > 8 Stunden

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place

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concentration and quantity of hazardous substances.

Respiratory protection

Provide adequate ventilation.

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|------------------|----------------|
| Physical state: | Liquid |
| Colour: | light red |
| Odour: | stinging |
| Odour threshold: | not determined |

Test method**Changes in the physical state**

| | |
|---|----------------------|
| Melting point/freezing point: | not determined |
| Boiling point or initial boiling point and boiling range: | 100 °C Literaturwert |
| Flash point: | > 76 °C |

Flammability

| | |
|---------------|----------------|
| Solid/liquid: | not applicable |
| Gas: | not applicable |

Explosive properties

not explosive.

| | |
|----------------------------|----------------|
| Lower explosion limits: | not applicable |
| Upper explosion limits: | not applicable |
| Auto-ignition temperature: | not determined |

Self-ignition temperature

| | |
|--------|----------------|
| Solid: | not determined |
| Gas: | not determined |

| | |
|----------------------------|----------------|
| Decomposition temperature: | not determined |
|----------------------------|----------------|

| | |
|----------------------|-------------|
| pH-Value (at 20 °C): | 1 DIN 19261 |
|----------------------|-------------|

| | |
|----------------------|----------------|
| Viscosity / dynamic: | not determined |
|----------------------|----------------|

| | |
|------------------------|----------------|
| Viscosity / kinematic: | not determined |
|------------------------|----------------|

| | |
|-------------------|----------|
| Water solubility: | miscible |
|-------------------|----------|

Solubility in other solvents

not determined

| | |
|--|----------------|
| Partition coefficient n-octanol/water: | not determined |
|--|----------------|

| | |
|------------------|----------------|
| Vapour pressure: | not determined |
|------------------|----------------|

| | |
|---------------------|--------------------------------|
| Density (at 20 °C): | 1,030 -1,050 g/cm ³ |
|---------------------|--------------------------------|

| | |
|--------------------------|----------------|
| Relative vapour density: | not determined |
|--------------------------|----------------|

9.2. Other information

| | |
|------------------------|---------------------------|
| Sustaining combustion: | Not sustaining combustion |
|------------------------|---------------------------|

| | |
|----------------------|--|
| Oxidizing properties | |
| Not oxidising. | |

| | |
|-------------------|----------------|
| Evaporation rate: | not determined |
|-------------------|----------------|

Further Information

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

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Violent reaction with: Alkali (lye)

10.4. Conditions to avoid

Keep away from heat. Protect from sunlight.

10.5. Incompatible materials

Violent reaction with: Alkali (lye), Hydrogen peroxide

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Harmful if inhaled.

ATEmix calculated

ATE (inhalation dust/mist) 2,500 mg/l

| CAS No | Chemical name | | | | | |
|---------|-------------------------|------|-----------|---------|--------|----------|
| | Exposure route | Dose | | Species | Source | Method |
| 64-18-6 | formic acid | | | | | |
| | oral | LD50 | 730 mg/kg | Rat | IUCLID | OECD 401 |
| | inhalation (4 h) vapour | LC50 | 7,85 mg/l | Rat | IUCLID | OECD 403 |
| | inhalation dust/mist | ATE | 0,5 mg/l | | | |

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Practical experience

Corrosive to the respiratory tract.

11.2. Information on other hazards**Endocrine disrupting properties**

No information available.

Further information

The product has not been tested. The statement is derived from the properties of the single components.

To avoid risks to human health and the environment, comply with the instructions for use.

SECTION 12: Ecological information**12.1. Toxicity**

There are no data available on the mixture itself.

| CAS No | Chemical name | | | | | | |
|---------|--------------------------|-------|-----------|-----------|-------------------------|--------|--------|
| | Aquatic toxicity | Dose | | [h] [d] | Species | Source | Method |
| 64-18-6 | formic acid | | | | | | |
| | Acute fish toxicity | LC50 | 130 mg/l | 96 h | Leuciscus idus | IUCLID | |
| | Acute algae toxicity | ErC50 | 1000 mg/l | 72 h | Desmodesmus subspicatus | | |
| | Acute crustacea toxicity | EC50 | 365 mg/l | 48 h | Daphnia magna | IUCLID | |

12.2. Persistence and degradability

Product is acid. The product needs to apply neutralizing agents before draining to wastewater treatment plants.

12.3. Bioaccumulative potential

No information available.

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Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|---------|---------------|---------|
| 64-18-6 | formic acid | -0,54 |

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

The product has not been tested. The statement is derived from the properties of the single components. Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Before intended use: hazardous waste, Dispose of waste according to applicable legislation.

After intended use: The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised. Disposable via wastewater, if previously agreed with your local sewage treatment plant.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number or ID number:**

UN 3412

14.2. UN proper shipping name:

FORMIC ACID mit mind. 10 Masse-%, aber höchstens 85 Masse-% Säure

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

**Marine transport (IMDG)****14.1. UN number or ID number:**

UN 3412

14.2. UN proper shipping name:

FORMIC ACID with not less than 10% but not more than 85% acid by mass

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number or ID number:**

UN 3412

14.2. UN proper shipping name:

FORMIC ACID with not less than 10% but not more than 85% acid by mass

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

**14.5. Environmental hazards**

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ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Further information: see section 6, 7, 8

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Classified as Hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC) approved criteria for the classifying hazardous substances [NOHSC: 1008] 3rd edition.

Standard for the Uniform Scheduling of Medicines and Poisons.

Carcinogen classification under WHS Regulation 2011, Schedule 10.

Notification status in accordance with section 3 and current national legislation.

CAS Number: 64-18-6

HSNO Approval: HSR000979

HSNO Classification: 3.1C, 6.1C (All), 6.1C (I), 6.1D (O), 8.1A, 8.2B, 8.3A, 9.1D (All), 9.1D (F), 9.1D (C), 9.1D (A), 9.3C Group

Standard or Subgroup: Dangerous Good

GHS Classifications: Flammable liquid Category 3, Corrosive to metals Category 1, Acute oral toxicity Category 4, Acute inhalation toxicity Category 3, Skin corrosion Category 1B, Serious eye damage Category 1.

SECTION 16: Other information**Abbreviations and acronyms**

PBT: persistent and bioaccumulative and toxic

vPvB: very persistent, very bioaccumulative

CAS: Chemical Abstracts Service (division of the American Chemical Society)

ATE: Acute Toxicity Estimate

LD50: lethal dose, 50%

LC50: lethal concentration, 50%

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement concernant le transport international ferroviaire de marchandises Dangereuses (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

VOC: volatile organic compound(s)

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

| Classification | Classification procedure |
|---------------------|--------------------------|
| Acute Tox. 4; H332 | Calculation method |
| Skin Corr. 1B; H314 | Calculation method |
| Eye Dam. 1; H318 | Calculation method |

Relevant H and EUH statements (number and full text)

| | |
|--------|--|
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| EUH071 | Corrosive to the respiratory tract. |

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. Restricted to professional users.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)