

### Reciclean® W2

Ref. 03150/2.0/REG\_EU/EN

Revision Date: 24.06.2008

Previous date: 03.04.2007

Print Date:24.06.2008

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product information

#### Commercial Product Name

Reciclean® W2

### Use of the Substance/Preparation

Cleansing agent in combination with Reciclean W1.

### Company/Undertaking Identification

Kemira Chemicals B.V.  
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NETHERLANDS  
Telephone. +31181282211, Telefax. +31181282513  
Kemira.ProductSafety@kemira.com

### Emergency telephone

|| +31181282474  
Carechem 24 International: +44 (0)208 762 8322

## 2. HAZARDS IDENTIFICATION

Corrosive; Causes burns.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

CAS/EU number	Chemical name of the substance	Concentration	Warning symbol, R-phrases and other information
64-18-6 200-579-1	Formic acid	15 %	Corrosive C,R35

### Further information

Organic acid.

## 4. FIRST AID MEASURES

### Inhalation

Move to fresh air. Keep warm and in a quiet place. Call a physician if symptoms occur.

### Skin contact

Wash off immediately with plenty of water removing all contaminated clothes and shoes.

### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician

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immediately.

#### Ingestion

Rinse mouth. Few gulps of water can be drunk to reduce irritation. Do NOT induce vomiting. Obtain medical attention.

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Alcohol-resistant foam, Dry powder, Carbon dioxide (CO<sub>2</sub>), Water mist

#### Specific hazards during fire fighting

Heating can release hazardous gases.  
Carbon monoxide

#### Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus. Splashproof protective suit.

#### Specific methods

Cool containers / tanks with water spray.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Keep people away from and upwind of spill/leak. Avoid contact with skin and eyes. Use personal protective equipment.

#### Environmental precautions

Should not be released into the environment. Dam up. Take up mechanically and collect into suitable containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

#### Methods for cleaning up

Neutralize with sodium carbonate. Dispose of as special waste in compliance with local and national regulations.

### 7. HANDLING AND STORAGE

#### Handling

Handle and open container with care. Wear personal protective equipment. Provide sufficient air exchange and/or exhaust in work rooms. In case of insufficient ventilation, wear suitable respiratory equipment.

#### Storage

Keep away from open flames, hot surfaces and sources of ignition. Protect from sunlight. Keep away from combustible material.

Materials for packaging:

Suitable material: original acid resistant container

Materials to avoid:

Bases, Copper, Aluminium

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Exposure Limit Values

#### Limit values in other countries

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**FI:****Formic acid**TWA = 3 ppm = 5 mg/m<sup>3</sup>STEL = 10 ppm = 19 mg/m<sup>3</sup>**SE:****Formic acid**NGV = 3 ppm = 5 mg/m<sup>3</sup>KTV = 5 ppm = 9 mg/m<sup>3</sup>**DE:****Formic acid**AGW = 5 ppm = 9,5 mg/m<sup>3</sup>, 2**AT:****Formic acid**MAK = 5 ppm = 9 mg/m<sup>3</sup>STEL = 5 ppm = 9 mg/m<sup>3</sup>, Mow**BE:****Formic acid**TWA = 5 ppm = 9,5 mg/m<sup>3</sup>STEL = 10 ppm = 19 mg/m<sup>3</sup>**CH:****Formic acid**TWA = 5 ppm = 9,5 mg/m<sup>3</sup>STEL = 10 ppm = 19 mg/m<sup>3</sup>, Remark defines the duration and frequency related to the short term MAK value (frequency x duration (minutes per shift))**CZ:****Formic acid**TWA = 9 mg/m<sup>3</sup>STEL = 18 mg/m<sup>3</sup>**DK:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**EE:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>STEL = 5 ppm = 9 mg/m<sup>3</sup>**ES:****Formic acid**VLA-ED = 5 ppm = 9 mg/m<sup>3</sup>VLA-EC = 10 ppm = 18 mg/m<sup>3</sup>**FR:****Formic acid**VLE = 5 ppm = 9 mg/m<sup>3</sup>, : indicative exposure limits**GB:****Formic acid**TWA = 5 ppm = 9,6 mg/m<sup>3</sup>**GR:**

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**Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**HU:****Formic acid**TWA = 9 mg/m<sup>3</sup>, m: caustic substance (burns the skin, mucous membranes, eyes or all three)PEAK = 9 mg/m<sup>3</sup>, m: caustic substance (burns the skin, mucous membranes, eyes or all three)**IE:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**LT:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**LU:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**LV:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**NL:****Formic acid**STEL = 5 mg/m<sup>3</sup>**NO:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**PL:****Formic acid**TWA = 5 mg/m<sup>3</sup>STEL = 15 mg/m<sup>3</sup>**PT:****Formic acid**

TWA = 5 ppm

STEL = 10 ppm

**SI:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**SK:****Formic acid**TWA = 5 ppm = 9 mg/m<sup>3</sup>**Exposure controls****Occupational exposure controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment. (filter E)

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#### Hand protection

Glove material: butyl-rubber, Break through time: > 8 h

Glove material: Neoprene, Break through time: > 8 h

Glove material: PVC, Break through time: > 4 h

#### Eye protection

Tightly fitting safety goggles.

#### Skin and body protection

Splashproof protective suit. Apron. Boots.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### General Information (appearance, odour)

Physical state	liquid,
Colour	colourless, clear
Odour	pungent

#### Important health safety and environmental information

pH	1,5 - 2,0
Boiling point/boilingrange	ca. 107 °C
Flash point	> 66 °C
<b>Explosive properties:</b>	
Lower explosion limit, Formic acid	18 %(V)
Upper explosion limit, Formic acid	51 %(V)
Vapour pressure	< 4,4 kPa ( 20 °C) formic acid
Bulk density	1.035 kg/m³
<b>Solubility:</b>	
Water solubility	completely soluble
Partition coefficient: n-octanol/water, Formic acid	log Pow: -0,54

#### Other data

Autoignition temperature	> 520 °C formic acid
Melting point/range	-6 °C

## 10. STABILITY AND REACTIVITY

#### Conditions to avoid

High temperatures.

#### Materials to avoid

Bases, Copper, Aluminium

#### Hazardous decomposition products

Thermal decomposition products:  
Carbon monoxide

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Formic acid:**

LD50/Oral/rat: 1.210 mg/kg

LC50/Inhalation/4 h/rat: 7,4 mg/l

**Irritation and corrosion**

Skin:

Causes burns.

Mucous membranes:

At high concentrations vapours may cause inflammation of conjunctiva and cornea.

**Sensitisation**

no data available

**Long term toxicity**

Other information

May cause skin irritation and/or dermatitis.

**Human experience**

Inhalation

Symptoms: sore throat, cough and difficulties in breathing

Skin contact

Causes burns.

**12. ECOLOGICAL INFORMATION****Ecotoxicity effects****Aquatic toxicity****Formic acid:**

|| LC50/96 h/Leuciscus idus (Golden orfe): 46 - 100 mg/l

EC50/48 h/Daphnia: 34,2 mg/l

EC50/72 h/algae/DIN 38412: 26,9 mg/l

**Toxicity to other organisms**

no data available

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#### Mobility

Vapour pressure: < 4,4 kPa ( 20 °C)

Water solubility: completely soluble

#### Formic acid:

Vapour pressure:ca. 44 hPa ( 20 °C)

#### Persistence and degradability

##### Biological degradability:

##### Formic acid:

Readily biodegradable

DOC reduction/OECD Test Guideline 301E/14 d: 98 %

Biochemical Oxygen Demand (BOD): 86 mg/g (5 d)

Chemical Oxygen Demand (COD): 348 mg/g

#### Bioaccumulative potential

Does not bioaccumulate.

#### Formic acid:

Partition coefficient: n-octanol/water: log Pow: -0,54

#### Other adverse effects

### 13. DISPOSAL CONSIDERATIONS

<b>Product</b>	Solutions with low pH-value must be neutralized before discharge. Dispose of as special waste in compliance with local and national regulations.
<b>Contaminated packaging</b>	Must be disposed of in accordance with local and national regulations.

### 14. TRANSPORT INFORMATION

<b>UN-Number</b>	3412
<b>Packing group</b>	II
<b>Land transport</b>	
<b>ADR/RID:</b>	
<b>Class:</b>	8
<b>Packaging group:</b>	II
<b>Classification Code:</b>	C3
<b>Risk code</b>	80
<b>ADR/RID-Labels:</b>	8
<b>Description of the goods:</b>	UN3412, FORMIC ACID

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#### Sea transport

**IMDG:**  
**Class:** 8  
**Proper technical name:** UN3412, FORMIC ACID  
**Packaging group:** II  
**IMDG-Labels:** 8  
**Marine pollutant:** No Marine Pollutant

#### Air transport

**ICAO/IATA:**  
**Class:** 8  
**Proper technical name:** UN3412, Formic acid  
**Packaging group:** II  
**ICAO-Labels:** 8

#### Other information

Note! Classification has changed.

## 15. REGULATORY INFORMATION

#### Information on the warning label

##### Symbol(s)



C, Corrosive

#### Hazardous components which must be listed on the label

EINECS-No.	CAS-No.	Components
200-579-1	64-18-6	Formic acid

#### R-phrases

R34 Causes burns.

#### S-phrases

S 1/2 Keep locked up and out of the reach of children.  
 S23 Do not breathe vapour.  
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### Other information

The product is classified and labelled in accordance with EC directives.

**16. OTHER INFORMATION****Text of R phrases mentioned in Section 3**

R35 Causes severe burns.

**Training advice****Recommended restrictions on use****Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Sources of key data used to compile the Safety Data Sheet**

Regulations, databases, literature, own tests.

**Additions, Deletions, Revisions**

Relevant changes have been marked with vertical lines.