

## Safety Data Sheet

### 1. Product and Company Identification

Product name :Super Remover No.1-RA

Name of supplier :SOLAR CO., LTD.

Address :1-7, Nunobiki-cho-2-chome, Chuo-ku, Kobe, Hyogo-Pref. 651-0097 JAPAN

Division :R & D DEPT.

Phone :+81-790-49-2366

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Product code(SDS NO) :EN200070W-4

### 2. Hazards identification

GHS classification and label elements of the product

GHS classification

#### HEALTH HAZARDS

Acute toxicity Oral : Category 4

Skin corrosion/irritation : Category 1

Serious eye damage /eye irritation : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity-single exposure : Category 1

Specific target organ toxicity - single exposure; Narcosis Category 3

Specific target organ toxicity-repeated exposure : Category 1

#### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment-acute toxicity : Category 2

Hazardous to the aquatic environment-chronic toxicity : Category 2



Signal word : Danger

#### HAZARD STATEMENT

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Suspected of causing cancer

Causes damage to organs after single exposure.

May cause drowsiness and dizziness

Causes damage to organs following repeated exposure.

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Wear protective gloves/protective clothing/face protection.

Use personal protective equipment as required.

##### Response

Immediately call a POISON CENTRE or doctor/physician.

Get medical advice/attention if you feel unwell.

Rinse mouth.

Wash contaminated clothing before reuse.

Collect spillage.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

IF exposed or concerned: Get medical advice/attention.

#### Storage

Store locked up.

Store in well-ventilated place. Keep container tightly closed.

#### Disposal

Dispose of contents/container in accordance with local/national regulation

### 3. Composition/Information on Ingredients

Substance/Preparation :Preparation

Ingredient name	content(%)	CAS No.	PRTR law No, Japan
Dichloromethane	83.5	75-09-2	1-186
Cresol (mixed isomers)	4.8	1319-77-3	1-086
Formic acid	5 - 10	64-18-6	-
Acetic acid	1 - 5	64-19-7	-
Activator	1 - 5	Non Public	-
Thickener	1 - 5	Non Public	-
Paraffin	1 - 5	8002-74-2	-
n-Butanol	0.1 - 1	71-36-3	-
Isopropyl alcohol	0.1 - 1	67-63-0	-
Additive	<0.1	Non Public	-

### 4. First-aid measures

#### IF INHALED

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Give artificial respiration if victim is not breathing. Get immediate medical attention/advice.

#### IF ON SKIN(or hair)

Take off immediately all contaminated clothing and shoes.

Wash with plenty of soap and water. Never use solvent or thinner.

If you observe unusual symptom, have irritation/pain and/or feel unwell, seek medical advice.

#### IF IN EYES :

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

Rinse in order to better reach all parts of eyes.

Get medical advice/attention.

#### IF SWALLOWED

Rinse mouth.

Do NOT induce vomiting.

Do not give an unconscious person anything to drink.

Seek medical advice immediately and show this container or label.

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#### 5. Fire-fighting measures

##### Suitable extinguishing media

In case of fire, use water mist, foam, dry powder or CO2.

##### Specific hazards arising from the chemical

(Dichloromethane)

Decomposes in a flame or hot surface to form toxic and corrosive gases of phosgene, hydrogen chloride and chlorine.

##### Specific fire-fighting measures

Use appointed fire extinguisher.

Remove flammable matters quickly from nearby.

Apply water from a safe distance to cool and protect surrounding area.

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

Fire extinguishing work has to be done from windward.

Wear proper protective equipment.

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#### 6. Accidental Release Measures

##### Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Keep unauthorized personnel away.

##### Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

##### Methods and materials for neutralization, containment and cleaning up

Place in a covered container.

Use non-sparking tools to collect absorbed material.

##### Preventive measures for secondary accident

Prepare extinguishers before catching fire.

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#### 7. Handling and Storage

##### Precautions for safe handling

###### Preventive measures

Use personal protective equipment as required.

Take precautionary measures against static discharge.

##### Safety Measures/Incompatibility

Handle in good ventilation.

Do not handle until all safety precautions have been read and understood.

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

###### Recommendation for storage

Keep container tightly closed.

Protect from sunlight. Store in a well-ventilated place.

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#### 8. Exposure Controls/Personal Protection

##### Control parameters e.g. occupational exposure limit values or biological limit values

##### Control value

(Cresol (mixed isomers))

Japan control value (1995) <= 5ppm

(Isopropyl alcohol)

Japan control value (2004) <= 200ppm

(n-Butanol)

Japan control value (1995) <= 25ppm

(Dichloromethane)

Japan control value (2004) <= 50ppm

## Adopted value

(Cresol (mixed isomers))

JSOH(1986) 5ppm; 22mg/m<sup>3</sup> (dermal)

(Formic acid)

JSOH(1978) 5ppm; 9.4mg/m<sup>3</sup>

(Acetic acid)

JSOH(1978) 10ppm; 25mg/m<sup>3</sup>

(Isopropyl alcohol)

JSOH(1987) (ceiling limit) 400ppm; 980mg/m<sup>3</sup>

(n-Butanol)

JSOH(1987) (ceiling limit) 50ppm; 150mg/m<sup>3</sup> (dermal)

(Dichloromethane)

JSOH(1999) 50ppm; 170mg/m<sup>3</sup>; (ceiling) 100ppm; 340mg/m<sup>3</sup>

(Cresol (mixed isomers))

ACGIH(1979) TWA: (5ppm) (Skin)(Eye, skin, &amp; URT irr)

(Formic acid)

ACGIH(1965) TWA: 5ppm

STEL: 10ppm (URT, eye &amp; skin irr)

(Acetic acid)

ACGIH(2003) TWA: 10ppm

STEL: 15ppm (URT &amp; eye irr; pulm func)

(Isopropyl alcohol)

ACGIH(2001) TWA: 200ppm

STEL: 400ppm (Eye &amp; URT irr; CNS impair)

(n-Butanol)

ACGIH(1998) TWA: 20ppm (Eye &amp; URT irr)

(Dichloromethane)

ACGIH(1997) TWA: 50ppm (COHb-emia; CNS impair)

(Paraffin)

ACGIH(1972) TWA: 2mg/m<sup>3</sup> (URT irr; nausea)

## Appropriate engineering controls

Do not use in areas without adequate ventilation.

Exhaust/ventilator should be available.

If work in closed space such as tank, must have ventilator capable to clean air in the bottom.

## Protective equipment

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective gloves/clothing

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9. Physical and Chemical Properties

## Physical properties

Appearance :liquid

Color :pale orange

pH :ca 2.5

Flash point :No data

Specific gravity :ca 1.26

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10. Stability and Reactivity

**Stability**

(Dichloromethane)

Vinyl chloride, hydrogen chloride, phosgene and carbon monoxide may form when heated to decomposition.

**Possibility of hazardous reactions**

(Dichloromethane)

Can react dangerously with strong oxidizers, strong reducers, aluminium powder, magnesium powder, sodium and calcium.

**Conditions to avoid**

(Dichloromethane)

Avoid heat.

Avoid contact with strong oxidizers, strong reducers, alkaline metal and metal powder.

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**11. Toxicological Information**

Symptoms related to the physical, chemical and toxicological characteristics

**Acute toxicity****Oral toxicity component(s) data**

(Cresol (mixed isomers))

rat LD50=1,454 mg/kg (IUCLID (2000))

(Formic acid)

rat LD50=730-1830 mg/kg (DFGOT (2003) et al)

(Acetic acid)

rat LD50=3310 mg/kg (PATTY (5th, 2001))

(Isopropyl alcohol)

rat LD50 = 3437 mg/kg (cal.)

(n-Butanol)

rat LD50=1227mg/kg (cal.)

(Dichloromethane)

rat LD50=1,600 mg/kg (evaluated by EPA\_JP vol.2 (2003))

**Dermal toxicity component(s) data**

(Cresol (mixed isomers))

rabbit LD50=2,000 mg/kg (EHC 168 (1995))

(Acetic acid)

rabbit LD50=1060 mg/kg (PATTY (5th, 2001))

(Isopropyl alcohol)

rabbit LD50=4059 mg/kg (CERI hazard data(1999))

(n-Butanol)

rabbit LD50=3636mg/kg (cal.)

**Inhalation toxicity component(s) data**

(Formic acid)

vapor : rat LC50 =7.4mg/L (DFGOT vol. 19 (2003))

**Labor standard law, Japan; Toxic**

Cresol (mixed isomers); Dichloromethane

**Safety measure published substances, Japan**

Dichloromethane

**Irritant properties****Skin corrosion/Irritation component(s) data**

(Formic acid)

rabbit 610 mg open ; MILD

(Acetic acid)

rabbit 525 mg open ; SEVERE rabbit 50 mg/24H ; MILD

(Isopropyl alcohol)

rabbit 500 mg ; MILD

(n-Butanol)

rabbit 405 mg/24H ; MODERATE  
(Dichloromethane)

rabbit 810 mg/24H ; SEVERE

#### Serious eye damage /irritation

Eye damage/irritation component(s) data  
(Formic acid)

rabbit 122 mg ; SEVERE

(Acetic acid)

rabbit 50 µg ; SEVERE rabbit 100 mg rinse ; MILD

(Isopropyl alcohol)

rabbit 10 mg ; MODERATE

(n-Butanol)

rabbit 1.62mg ; SEVERE

(Dichloromethane)

rabbit 162 mg ; MODERATE rabbit 10 mg ; MILD

#### Mutagenic effects

(Dichloromethane) Registered-24(1997)

#### Carcinogenic effects

(Isopropyl alcohol)

IARC-Gr.3 ; Not Classifiable as a Human Carcinogen.

(Dichloromethane)

IARC-Gr.2B ; Possibly carcinogenic to humans.

(Cresol (mixed isomers))

ACGIH-A4(2009) : Not Classifiable as a Human Carcinogen

(Isopropyl alcohol)

ACGIH-A4(2001) : Not Classifiable as a Human Carcinogen

(Dichloromethane)

ACGIH-A3(1997) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

(Dichloromethane)

JSOH-2B; Insufficient Evidence of Carcinogenicity for Humans

(Dichloromethane)

EU-Category 3; Causes concern for Human carcinogenic effect

#### Delayed and immediate effects and also chronic effects from short- and long-term exposure

Specific target organ toxicity (single exposure cat.1)

(Dichloromethane) CNS; respiratory apparatus/system ( CERI/NITE hazard assessment No.15 (2004) )

Specific target organ toxicity (single exposure cat.2)

(Formic acid) respiratory apparatus/system; blood/blood system; kidney ( DFGOT (2003) et al )

(Acetic acid) blood/blood system; respiratory apparatus/system (ACGIH (2004) et al)

(Cresol (mixed isomers)) blood/blood system; respiratory apparatus/system; heart; liver; kidney; CNS (DFGOT vol.14 (2000) et al)

Specific target organ toxicity (single exposure cat.3 drowsiness/dizziness)

(Dichloromethane) Narcosis ( CERI/NITE hazard assessment No.15 (2004) )

Specific target organ toxicity (repeated exposure cat.1)

(Dichloromethane) CNS; liver ( CERI/NITE hazard assessment No.15 (2004) )

Specific target organ toxicity (repeated exposure cat.2)

(Cresol (mixed isomers)) CVS; blood/blood system; kidney; CNS ( DFGOT vol.14 (2000) et al )

## 12. Ecological Information

### Ecotoxicity

#### Aquatic toxicity

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

(Cresol (mixed isomers))

Crustacea (Gammaridea) EC50=7mg/L/48hr (CERI\_NITE, 2006)  
 (Formic acid)  
 Algae (Scenedesmus) EC50 = 25mg/L/96hr (HSDB, 2009)  
 (Acetic acid)  
 Crustacea (Daphnia magna) EC50=65 mg/L/48hr (AQUIRE, 2010)  
 (Isopropyl alcohol)  
 Fish (top minnow) LC50 > 100 mg/L/96hr (EPA\_Japan, 1997)  
 (n-Butanol)  
 Fish (top minnow) LC50 > 100 mg/L/96hr (EPA\_Japan, 1996)  
 (Dichloromethane)  
 Fish (fat head minnow) LC50=5.2 mg/L/96hr (EHC164, 1996)

#### Water solubility

(Formic acid)  
 miscible (ICSC, 1997)  
 (Acetic acid)  
 miscible (ICSC, 1997)  
 (Isopropyl alcohol)  
 miscible (ICSC, 1999)  
 (n-Butanol)  
 63.2 g/L (PHYSPROP Database, 2005)  
 (Dichloromethane)  
 1.3 g/100 ml (20 C) (ICSC, 2000)  
 (Paraffin)  
 none (ICSC, 2003)

#### Persistence and degradability

(Formic acid)  
 BOD\_Degradation : 110%(Registered chemicals data check & review, Japan)  
 (Acetic acid)  
 BOD\_Degradation : 74%(Registered chemicals data check & review, Japan)  
 (Dichloromethane)  
 BOD\_Degradation : 13%(Registered chemicals data check & review, Japan)

#### Bioaccumulative potential

(Cresol (mixed isomers))  
 log Pow=1.95 (PHYSPROP Database, 2005)  
 (Formic acid)  
 log Pow=-0.54 (PHYSPROP Database, 2005)  
 (Acetic acid)  
 log Pow=-0.17 (PHYSPROP Database, 2005)  
 (Isopropyl alcohol)  
 log Pow=0.05 (ICSC, 1999)  
 (n-Butanol)  
 log Pow=0.9 (ICSC, 2005)  
 (Dichloromethane)  
 log Pow=1.25 (ICSC, 2000) ; BCF=40 (Check & Review, Japan)  
 (Paraffin)  
 log Kow=2.11 (PHYSPROP Database, 2005)

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### 13. Disposal Considerations

#### Waste residues

Avoid release to the environment (- if this is not the intended use).  
 Dispose of contents/container in accordance with local/national regulation.

#### Industrial disposals control law, Japan

contents > 2mg/L or extracts > 0.2mg/L  
 Dichloromethane

Soil contaminant control law, Japan  
Underground water < 0.02mg/L  
Dichloromethane  
Clean water act, Japan  
harmful substance, drainage =< 0.2mg/L  
Dichloromethane

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#### 14. Transport Information

UN No, UN CLASS  
UN No :No data  
ERG GUIDE NO :160  
Sea pollutants control law  
Noxious Liquid ; Cat. Y :Paraffin; Cresol (mixed isomers); Formic acid; Dichloromethane  
Noxious Liquid ; Cat. Z :Acetic acid; Isopropyl alcohol; n-Butanol  
Special precautions in connection with transport or conveyance  
Follow instruction in Handling & Storage.

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#### 15. Regulatory Information

Industrial Safety and Health law, Japan  
Organic Solvents Class II :Dichloromethane  
Harmful substances to be indicated :Cresol (mixed isomers); Dichloromethane  
Chemical name et al should be informed :Formic acid; Cresol (mixed isomers)  
; Paraffin; Acetic acid; Dichloromethane; n-Butanol; Isopropyl alcohol  
PRTR law, Japan  
Listed chemicals Gr.1 :Cresol (mixed isomers); Dichloromethane  
Chemical Substances Control Law, Japan  
Priority Assessment Chemical Substances : Dichloromethane  
Clean air act, Japan  
Listed substance ; TWA(in Air)=<0.15mg/m3/yearAve.  
Dichloromethane

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#### 16. Other information

Reference Book  
Globally Harmonized System of classification and labelling of chemicals, (4th ed., 2011), UN  
Recommendations on the TRANSPORT OF DANGEROUS GOODS 17th edit. UN  
Classification, labelling and packaging of substances and mixtures (reg.(EC) No 1272/2008)  
2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)  
2011 TLVs and BEIs. (ACGIH)  
<http://monographs.iarc.fr/monoeval/grlist.html>  
Supplier's data/information

#### Other information

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own test