



Safety Data Sheet - Resist Remover RR41

1. Identification of Substance / Preparation and Company

Trade name:

Resist Remover RR41

Use of the substance/Preparation:

Industry sector: semiconductor industry photolithography sector

Type of use: solution for resist removing

NOT FOR RECREATIONAL OR PERSONAL USE. NEVER CONSUME THIS PRODUCT.

Identification of the company:

Futurex, Inc.
24 Munsonhurst Rd
Franklin, NJ 07416 USA

Telephone no. 1-888-999-4188 from 8:00 am to 6:00 pm (EST)

Emergency telephone number: 1-800-535-5053 (U.S. and Canada)
1-352-323-3500 (International)

Person Responsible for SDS preparation:

Aga Rusin, e-mail: info@futurex.com

2. Hazards identification

GHS CLASSIFICATION:

HEALTH	ENVIROMENTAL	PHYSICAL
Acute Oral Toxicity: not classified Eye Irritation: Category 2B Skin Irritation: Category 3	Acute Toxicity: None Known Chronic Toxicity: None Known	Flammable Liquid: Category 4

Contact:

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Website: www.futurex.com

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GHS LABEL: None

SIGNAL WORD: Warning!

HAZARD STATEMENTS	PRECAUTIONARY STATEMENTS
H227 Combustible liquid H319 Causes eye irritation H316 Causes mild skin irritation H373 May cause damage to organs through prolonged or repeated exposure	P233 Keep container closed. P262 Do not get in eyes, on skin, or on clothing. P261 Avoid breathing dust, mist, and vapor. P270 Do not eat, drink, or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection. P403+235 Keep container in a cool, well-ventilated area. P264 Wash hands thoroughly after handling.

3. Composition/information on ingredients

CAS#	EINECS	Chemical Name	Concentration	Hazard symbols	R phrases*
67-68-5	200-664-3	Dimethyl sulfoxide	20-80		
		aminoderivative	20-80		

4. First aid measures

Description of necessary measures according to routes of exposure

Swallowed

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Eye

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In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin

Flush skin with water after contact. Wash contaminated clothing before reuse.

Inhaled

If inhaled, immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Advice to Doctor

Treat symptomatically and supportively.

Additional Information

Not available

5. Fire Fighting Measures

Extinguishing Media

Firefighters should wear full protective clothing including self-contained breathing apparatus. In case of fire use water spray, foam, dry chemical, CO₂.

Hazards from Combustion Products

Chemical stability: stable Incompatibility with other materials: Incompatible or may react with strong oxidizers, acids, alkaline materials Decomposition : Decomposes with heat Polymerization : polymerization will not occur. Hazardous gases/vapors produced in fire are carbon monoxide.

Special protective precautions and equipment for fire fighters

No Data Available

Flammability Conditions

This product is a combustible liquid with regard to AS 1940. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Combustible liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread

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along the ground and collect in low or confined areas.

Additional Information

Hazchem Code : N/A

6. Accidental release measures

Emergency procedures

Clean-up personnel should wear full protective clothing including breathing apparatus. Remove source of heat, sparks, flame, impact, friction or electricity. Prevent material from entering sewers, waterways, or low areas. Provide ventilation.

Methods and materials for containment and clean up

Recover free liquid for reuse or reclamation. Recover undamaged and minimally contaminated material for reuse and reclamation. Soak up with sawdust, sand, oil, dry or other absorbent material.

7. Handling and Storage

Precautions for safe handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Keep away from heat and flame. Ensure an eye bath & safety shower are available and ready for use.

Conditions for safe storage, including any incompatibles

This product is a combustible liquid with regard to AS 1940. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Storage under a nitrogen blanket has been recommended. Store protected from moisture.

8. Exposure Controls, Personal Protection

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National Exposure Standards

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Dimethyl sulfoxide	none listed	none listed	none listed

Biological Limit Values

No Data Available

Engineering Controls

Use sufficient ventilation to keep employee exposures below recommended limits.

Personal Protection

Eye/Face Protection: Wear safety glasses. Wear overall chemical goggles when possibility exists for eye and face contact due to splashing or spraying material. Respirator: An approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentration is expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, exposures levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection. Protective clothing: Wear impervious clothing, such as gloves, apron, boots or whole bodysuit as appropriate.

9. Physical and Chemical Properties

Physical State	liquid
Color	colorless
Odor	perceptible
Odor Threshold	Not available
pH	Not available
Melting Point	19 °C
Boiling Point	189 °C
Flash Point	87 °C
Evaporation Rate	Not available
Flammability	Flammable liquid
Flammability Limits (as percentage volume in air)	
Lower Explosion Limit	2.6%
Upper Explosion Limit	42%

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Vapor Pressure	0.4 mmHg (20 °C)
Vapor Density	2.7 (air=1)
Specific Gravity/Relative Density	1.1 (water = 1)
Solubility in water	Completely miscible
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	215 °C
Decomposition temperature	>189 °C
Viscosity	1.1 cP (25 °C)

10. Stability and reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Ignition sources, moisture, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, strong bases, acid chlorides.

Hazardous Decomposition Products: Carbon monoxide, oxides of sulfur, carbon dioxide, formaldehyde, dimethyl sulfide.

Hazardous Polymerization: Will not occur.

11. Toxicological information

Toxicity Data

RTECS#:

CAS# 67-68-5: PV6210000

LD50/LC50:

CAS# 67-68-5:

- Draize test, rabbit, eye: 100 mg;
- Draize test, rabbit, eye: 500 mg/24 hr Mild;
- Draize test, rabbit, skin: 500 mg/24 hr Mild;
- Oral, mouse: LD50 = 7920 mg/kg;
- Oral, rat: LD50 = 14500 mg/kg;
- Skin, rat: LD50 = 40 gm/kg;

Swallowed

No data supplied.

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Eye

Eye contact may cause eye irritation with discomfort, tearing or blurring of vision.

Skin

May cause skin irritation with discomfort or rash.

Inhaled

Inhalation may cause irritation of the upper respiratory passages, with coughing and discomfort. Some individuals who have been overexposed by inhalation or skin contact experienced blurry vision.

12. Ecological Information

Aquatic Toxicity

No data available. No information available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other

Bacterial decomposition of dimethyl sulfoxide during wastewater treatment can result in the release of dimethyl sulfide, a volatile substance with a strong, disagreeable odor.

13. Disposal considerations

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

OTHER DISPOSAL CONSIDERATIONS:

This material, when discarded, is not a hazardous waste as that term is defined by the Resource,

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Conservation and Recovery Act (RCRA), 40 CFR 261. Dispose of by incineration or recycle in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

14. Transport information

Department of Transportation (DOT) Requirements:

Not regulated as dangerous goods

IATA

Not regulated as dangerous goods

RID/ADR

Not regulated as dangerous goods

General Transportation Information for Bulk Shipments

Proper Shipping Name Chemicals N.O.S.

15. Regulatory information

Labeling in accordance with Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

NFPA Rating (estimated):

Health: 2

Flammability: 2

Instability: 0

Hazard symbols

Not available.

Hazardous component(s) to be indicated on label

R phrases

S phrases

S 24/25 Avoid contact with skin and eyes.

US FEDERAL

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FUTURREX, INC.
Productivity Tools

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Creation date: 06/02/2011
Last update: 01/31/2018

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TSCA:

Ingredients are listed on the TSCA inventory.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

16. Other information

Alterations/supplements to the previous editions:

General update

References:

[1] Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Fourth revised edition, UNITED NATIONS, New York and Geneva, 2011

Sources of key data used to compile the datasheet

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Futurrex be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Futurrex has been advised of the possibility of such damages.

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