

Safety Data Sheet

Version 2.5
Revision Date 08/01/2016

SDS Number 300000007293
Print Date 11/28/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ACT[®] 970 Remover/Resist Stripper

Product Use Description : Semiconductor Processing

Manufacturer/Importer/Distributor : Versum Materials US, LLC
7201 Hamilton Blvd.
Allentown, PA 18195-1501
Exporter EIN No.475632014
www.versummaterials.com

Telephone : (610)481-4911

Emergency telephone number (24h) : 800-523-9374 USA
+1 610 481 7711 International

2. HAZARDS IDENTIFICATION

GHS classification

Acute toxicity - Oral Category 4
Skin corrosion - Category 1C
Serious Eye Damage - Category 1

GHS label elements

Hazard pictograms/symbols



Signal Word: Danger

Hazard Statements:

H302:Harmful if swallowed.
H314:Causes severe skin burns and eye damage.

Precautionary Statements:

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- Prevention : P264:Wash hands thoroughly after handling.
P270:Do not eat, drink or smoke when using this product.
P280:Wear protective gloves/protective clothing/eye protection/face protection.
- Response : P301+P312 :IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P301+P330+P331 :IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 :IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 :IF INHALED: Remove victim to fresh air and keep at rest in a position 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 CENTRE/doctor.
P363 :Wash contaminated clothing before reuse.
- Storage : P405:Store locked up.
- Disposal : P501:Disposal of contents/container to be specified in accordance with regulations.

Hazards not otherwise classified

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
N-METHYLETHANOLAMINE	109-83-1	70% - 80 %

Please treat the information contained within the SDS(s) as confidential information. In this regard, the information contained within the SDS(s) may be the subject of, for example, a confidentiality agreement or non-disclosure agreement (NDA) with your company and/or a patent application or patent.

4. FIRST AID MEASURES

- General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
- Eye contact : Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Rinse immediately with plenty of water also under the eyelids for at least 20 minutes.
- Skin contact : Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Flush immediately with copious amounts of

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water. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.

- Ingestion : Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
- Inhalation : If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.
- Most important symptoms/effects - acute and delayed : Eye disease. Skin disorders and Allergies.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam.
Carbon dioxide (CO₂).
Dry chemical.
Dry sand.
Limestone powder.
- Specific hazards : Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.
- Special protective equipment for fire-fighters : Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Further information : Do not allow run-off from fire fighting to enter drains or water courses., Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions, Protective Equipment, and Emergency Procedures : Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.
- Environmental precautions : Construct a dike to prevent spreading.
- Methods for cleaning up : Call Emergency Response number for advice. Approach suspected leak areas with caution. Place in appropriate chemical waste container.
- Additional advice : Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

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7. HANDLING AND STORAGE

Handling

Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : Butyl-rubber
Nitrile rubber.
Neoprene gloves.
Polyvinyl Alcohol Gloves (PVA).
Impervious gloves.
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Full face shield with goggles underneath.
Chemical resistant goggles must be worn.

Skin and body protection : Impervious clothing.
Full rubber suit (rain gear).
Rubber or plastic boots.
Slicker Suit.

Special instructions for protection and hygiene : Discard contaminated leather articles. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Provide readily accessible eye wash stations and safety showers.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid. Greenish-blue.
Odor	: Amine-like.
Odor threshold	: No data available.
pH	: 11.6
Melting point/range	: -4 °F (-20 °C)
Boiling point/range	: > 212 °F (> 100 °C)
Flash point	: 221 °F (105 °C) open cup
Evaporation rate	: No data available.
Flammability (solid, gas)	: Not applicable.
Upper/lower explosion/flammability limit	: Not applicable.
Vapor pressure	: No data available.
Water solubility	: Completely soluble.
Relative vapor density	: Not applicable.
Relative density	: 0.983 (water = 1)
Partition coefficient (n-octanol/water)	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Viscosity	: No data available.
Molecular Weight	: No data available.
Density	: 61.367 lb/ft ³ (0.983 g/cm ³) at 70 °F (21 °C)

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to avoid	: No data available.

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Materials to avoid	: CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents. Metals. Acids. Halogenated compounds.
Hazardous decomposition products	: Nitric acid. Ammonia Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO2). Nitrosamine.
Possibility of hazardous Reactions/Reactivity	: No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Likely routes of exposure

Effects on Eye	: Causes eye burns. May cause blindness.
Effects on Skin	: Causes skin burns.
Inhalation Effects	: Can cause severe eye, skin and respiratory tract burns. Inhalation of aerosol may cause irritation to the upper respiratory tract.
Ingestion Effects	: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Harmful if swallowed.
Symptoms	: No data available.

Acute toxicity

Acute Oral Toxicity : No data is available on the product itself.

Acute Oral Toxicity - Components
N-METHYLETHANOLAMINE

LD50 : 1,391 mg/kg

Species : Rat.

Inhalation : No data is available on the product itself.

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Acute Dermal Toxicity : No data is available on the product itself.

Acute Dermal Toxicity - Components
N-METHYLETHANOLAMINE LD50 : > 2,000 mg/kg Species : Rabbit.

Skin corrosion/irritation : Causes skin burns.

Serious eye damage/eye irritation : Risk of serious damage to eyes.

Sensitization. : No data available.

Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.

Reproductive toxicity : No data is available on the product itself.

Germ cell mutagenicity : No data is available on the product itself.

Specific target organ systemic toxicity (single exposure) : No data available.

Specific target organ systemic toxicity (repeated exposure) : No data available.

Aspiration hazard : No data available.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Eye disease., Skin disorders and Allergies.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to fish - Components
N-METHYLETHANOLAMINE LC50 (96 h) : > 100 mg/l Species : Fish.

Toxicity to daphnia - Components
N-METHYLETHANOLAMINE EC50 (48 h) : 33 mg/l Species : Daphnia

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Toxicity to algae - Components
N-METHYLETHANOLAMINE

IC50 (72 h) : 18.4 mg/l

Species : Algae.

Toxicity to other organisms : No data available.

Persistence and degradability

Biodegradability : No data is available on the product itself.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

Bioaccumulation - Components
N-METHYLETHANOLAMINE

Low bioaccumulation potential.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : Contact supplier if guidance is required.

Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

DOT

UN/ID No. : UN3267
Proper shipping name : Corrosive liquid, basic, organic, n.o.s., (N-METHYLETHANOLAMINE)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

IATA

UN/ID No. : UN3267
Proper shipping name : Corrosive liquid, basic, organic, n.o.s., (N-METHYLETHANOLAMINE)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

IMDG

UN/ID No. : UN3267
Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (N-

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METHYLETHANOLAMINE)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

TDG

UN/ID No. : UN3267
Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (N-METHYLETHANOLAMINE)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact customer service.

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

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16. OTHER INFORMATION

HMIS Rating

Health : 3

Flammability : 1

Physical hazard : 0

Prepared by : Versum Materials, Product Regulatory Department

Telephone : (610)481-4911

Preparation Date : 11/28/2016

For additional information, please visit our Versum Materials' Product Stewardship web site.
<http://www.versummaterials.com/productstewardship/>
