

# Material Safety Data Sheet

## N,N-Diethylhydroxylamine, 97%

ACC# 73880

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** N,N-Diethylhydroxylamine, 97%

**Catalog Numbers:** AC114420000, AC114420050, AC114421000, AC114425000

**Synonyms:** Diethylhydroxylamine; N,N-Diethylhydroxylamine; Ethanamine, N-Ethyl-N-Hydroxy-; N-Hydroxydiethylamine.

**Company Identification:**

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

### Section 2 - Composition, Information on Ingredients

| CAS#      | Chemical Name            | Percent | EINECS/ELINCS |
|-----------|--------------------------|---------|---------------|
| 3710-84-7 | N,N-Diethylhydroxylamine | 97      | 223-055-4     |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: colorless clear liquid. Flash Point: 45 deg C.

**Warning! Flammable liquid and vapor.** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. This substance has caused adverse reproductive and fetal effects in animals. Hygroscopic (absorbs moisture from the air).

**Target Organs:** Reproductive system.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May cause irritation of the digestive tract.

**Inhalation:** May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.

**Chronic:** Adverse reproductive effects have been reported in animals.

### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT get water inside containers. Do NOT use straight streams of water.

**Flash Point:** 45 deg C ( 113.00 deg F)

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** 1.90 vol %

**Upper:** 10.00 vol %

**NFPA Rating:** (estimated) Health: 1; Flammability: 2; Instability: 0

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Do not get water inside containers. A vapor suppressing foam may be used to reduce vapors.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not allow contact with water. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Store protected from moisture.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

| Chemical Name            | ACGIH       | NIOSH       | OSHA - Final PELs |
|--------------------------|-------------|-------------|-------------------|
| N,N-Diethylhydroxylamine | none listed | none listed | none listed       |

**OSHA Vacated PELs:** N,N-Diethylhydroxylamine: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Clear liquid

**Appearance:** colorless

**Odor:** None reported.

**pH:** Not available.

**Vapor Pressure:** 4 mmHg @ 20 C

**Vapor Density:** 3.1

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 125 -130 deg C @ 760.00mmHg

**Freezing/Melting Point:** -26 deg C

**Decomposition Temperature:** Not available.

**Solubility:** miscible

**Specific Gravity/Density:** .8670g/cm3

**Molecular Formula:** C4H11NO

**Molecular Weight:** 89.14

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, moisture, excess heat, strong oxidants.

**Incompatibilities with Other Materials:** Strong acids, strong bases, strong oxidizing agents, strong reducing agents.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 3710-84-7: NC3500000

### LD50/LC50:

**CAS#** 3710-84-7:

Dermal, guinea pig: LD50 = 100 uL/kg;

### Carcinogenicity:

**CAS#** 3710-84-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** Experimental reproductive effects have been reported.

**Teratogenicity:** No information available.

**Reproductive Effects:** TYPE OF TEST: TDLo - Lowest published toxic dose ROUTE OF EXPOSURE: Parenteral SPECIES OBSERVED:

Rodent - rat DOSE: 180 mg/kg SEX/DURATION: male 1 day(s) pre-mating TOXIC EFFECTS :Reproductive - Fertility - pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea)REFERENCE : ENVRAL Environmental Research. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1967- Volume(issue)/page/year: 20,99,1979

**Mutagenicity:** See RTECS for actual entry.

**Neurotoxicity:** No information available.

**Other Studies:****Section 12 - Ecological Information**

No information available.

**Section 13 - Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

**Section 14 - Transport Information**

|                       | US DOT                    | Canada TDG                |
|-----------------------|---------------------------|---------------------------|
| <b>Shipping Name:</b> | FLAMMABLE LIQUIDS, N.O.S. | No information available. |
| <b>Hazard Class:</b>  | 3                         |                           |
| <b>UN Number:</b>     | UN1993                    |                           |
| <b>Packing Group:</b> | III                       |                           |

**Section 15 - Regulatory Information****US FEDERAL****TSCA**

CAS# 3710-84-7 is listed on the TSCA inventory.

**Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**Section 313** No chemicals are reportable under Section 313.**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

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

**STATE**

CAS# 3710-84-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN

**Risk Phrases:**

R 10 Flammable.

R 40 Limited evidence of a carcinogenic effect.

**Safety Phrases:**

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 9 Keep container in a well-ventilated place.

S 28A After contact with skin, wash immediately with plenty of water

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**WGK (Water Danger/Protection)**

CAS# 3710-84-7: 1

**Canada - DSL/NDSL**

CAS# 3710-84-7 is listed on Canada's DSL List.

**Canada - WHMIS**

WHMIS: Not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

|                                     |
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| Section 16 - Additional Information |
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**MSDS Creation Date:** 2/15/1999

**Revision #3 Date:** 10/03/2005

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