Material Safety Data Sheet
N,N-Diethylethanolamine, P.A.

ACC# 47026

Section 1 - Chemical Product and Company Identification

MSDS Name: N,N-Diethylethanolamine, P.A.
Catalog Numbers: AC219850000, AC219851000
Synonyms: 2-Diethylaminoethanol; Beta-Diethylaminoethanol
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
100-37-8	N,N-Diethylethanolamine	99.0	202-845-2

Hazard Symbols: XI
Risk Phrases: 10 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear yellow brown liquid. Flash Point: 60 deg C. **Flammable liquid and vapor.** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Hygroscopic (absorbs moisture from the air). **Warning!** May be harmful if swallowed or absorbed through the skin.
Target Organs: None.

Potential Health Effects
Eye: May cause eye irritation. May cause eye injury.
Skin: May cause severe skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation: Vapors may cause dizziness or suffocation. May cause nausea and possible vomiting.
Chronic: None

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 immediately.
Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician: Treat symptomatically and supportively.
Antidote: None reported.

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. 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. Do NOT get water inside containers. For large fires, use water spray, fog or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: 60 deg C (140.00 deg F)
Autoignition Temperature: 260 deg C (500.00 deg F)
Explosion Limits, Lower:6.70 vol %
Upper: 11.7 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. Avoid runoff into storm sewers and ditches which lead to waterways. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Store in a tightly closed container. 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-Diethylethanolamine	2 ppm TWA; skin - potential for cutaneous absorption	10 ppm TWA; 50 mg/m3 TWA 100 ppm IDLH	10 ppm TWA; 50 mg/m3 TWA

OSHA Vacated PELs: N,N-Diethylethanolamine: 10 ppm TWA; 50 mg/m3 TWA
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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear yellow brown
Odor: unpleasant odor
pH: Not available.
Vapor Pressure: 1.9 mbar @ 20 C
Vapor Density: 4.04
Evaporation Rate: Not available.
Viscosity: 5mPa @ 20C
Boiling Point: 161 deg C @ 760.00mm Hg
Freezing/Melting Point:-70 deg C
Decomposition Temperature: Not available.
Solubility: soluble
Specific Gravity/Density:.8840g/cm3
Molecular Formula:C6H15NO
Molecular Weight:117.19

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat, strong oxidants, exposure to moist air or water.
Incompatibilities with Other Materials: Moisture.
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# 100-37-8: KK5075000
LD50/LC50:
CAS# 100-37-8:
Dermal, guinea pig: LD50 = 1 mL/kg;
Draize test, rabbit, eye: 5 mg Severe;
Inhalation, mouse: LC50 = 5000 mg/m3;
Oral, rat: LD50 = 1300 mg/kg;
Skin, rabbit: LD50 = 1260 uL/kg;

Carcinogenicity:
CAS# 100-37-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.

Neurotoxicity: No information available.
Mutagenicity: No information available.
Other Studies: Standard Draize Test: Administration into the eye (rabbit) = 5 mg/24H (Severe).

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: 1780 mg/L; 96 Hr.; Flow-through

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	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	2-DIETHYLAMINOETHANOL				No information available.
Hazard Class:	8				
UN Number:	UN2686				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 100-37-8 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.
SARA

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.
SARA Codes
CAS # 100-37-8: acute, chronic, flammable.
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 depletors. This material does not contain any Class 2 Ozone depletors.
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# 100-37-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
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:
XI
Risk Phrases:
R 10 Flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:
S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)
CAS# 100-37-8: 1
Canada - DSL/NDSL

CAS# 100-37-8 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2.

Canadian Ingredient Disclosure List

CAS# 100-37-8 is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 100-37-8: OEL-AUSTRALIA:TWA 10 ppm (50 mg/m3);Skin OEL-AUSTRIA :TWA 10 ppm (50 mg/m3);Skin OEL-BELGIUM:TWA 10 ppm (48 mg/m3);Skin O EL-DENMARK:TWA 10 ppm (50 mg/m3);Skin OEL-FINLAND:STEL 10 ppm (50 mg/ m3);Skin OEL-FRANCE:TWA 10 ppm (50 mg/m3);Skin OEL-GERMANY:TWA 10 pp m (50 mg/m3);Skin OEL-THE NETHERLANDS:TWA 10 ppm (50 mg/m3);Skin OEL -THE PHILIPPINES:TWA 10 ppm (50 mg/m3);Skin OEL-RUSSIA:STEL 5 mg/m3;S kin OEL-SWITZERLAND:TWA 10 ppm (50 mg/m3);Skin OEL-UNITED KINGDOM:TW A 10 ppm (50 mg/m3);Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA che ck ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 5/03/1999
Revision #3 Date: 3/18/2003