

0.2% Diethylamine in Isopropyl Alcohol (v/v) - (806)

Version 1

Revision Date 06/02/2008

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 0.2% Diethylamine in Isopropyl Alcohol (v/v) - (806)
MSDS Number : 000000013075
Product Use Description : Laboratory Use

Company : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : Medical: 1-800-498-5701
: **Transportation: 1-800-424-9300 or +1-703-527-3887**
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : slight alcoholic

Hazard Summary : Flammable. In use, may form flammable/explosive vapour-air mixture. Irritating to eyes. May cause skin irritation. May cause respiratory tract irritation. May be harmful if swallowed. May cause irritation of the gastrointestinal tract. Can be absorbed through skin. Repeated exposure may cause skin dryness or cracking.

Potential Health Effects

Skin : May irritate skin.
Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

Eyes : Irritating to eyes.
May cause irreversible eye damage.
Causes itching, burning, redness and tearing.

Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
May cause systemic poisoning with symptoms paralleling those

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- of inhalation.
- Inhalation : May cause respiratory tract irritation.
Vapours may cause drowsiness and dizziness.
Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
- Chronic Exposure : Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.
Repeated or prolonged exposure to the substance can produce liver damage.
Repeated or prolonged exposure to the substance can produce kidney damage.
- Aggravated Medical Condition : Cardiac irregularities
Liver disorders
Kidney disorders
Neurological disorders
Respiratory disorders
Skin disorders
- Target Organs : Eyes
Skin
Respiratory system

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Propan-2-ol	67-63-0	99.80
Diethylamine	109-89-7	0.20

SECTION 4. FIRST AID MEASURES

- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

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- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.
- Ingestion : Do not induce vomiting without medical advice. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Treatment : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Flash point : 11.1 °C (52.0 °F)
closed cup
- Lower explosion limit : not determined
- Upper explosion limit : not determined
- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Cool closed containers exposed to fire with water spray.
- Extinguishing media which shall not be used for safety reasons : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.

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- Ensure adequate ventilation.
 Remove all sources of ignition.
 Do not swallow.
 Avoid breathing vapors, mist or gas.
 Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
 Discharge into the environment must be avoided.
 Do not flush into surface water or sanitary sewer system.
 Prevent product from entering drains.
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Methods for cleaning up : Ventilate the area.
 No sparking tools should be used.
 Use explosion-proof equipment.
 Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

SECTION 7. HANDLING AND STORAGE
Handling

- Handling : Wear personal protective equipment.
 Use only in well-ventilated areas.
 Keep container tightly closed.
 Do not smoke.
 Do not swallow.
 Avoid breathing vapors, mist or gas.
 Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.
 Take precautionary measures against static discharges.
 Ensure all equipment is electrically grounded before beginning transfer operations.
 Use explosion-proof equipment.
 Keep product and empty container away from heat and sources of ignition.
 No sparking tools should be used.
 No smoking.

Storage

- Requirements for storage areas and containers : Store in area designed for storage of flammable liquids. Protect from physical damage.
 Keep containers tightly closed in a dry, cool and well-ventilated place.

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Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store away from incompatible substances.
Container hazardous when empty.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
- Engineering measures : Use with local exhaust ventilation.
Prevent vapor buildup by providing adequate ventilation during and after use.
- Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes
- Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Wear as appropriate:
Solvent-resistant apron
Flame retardant antistatic protective clothing
If splashes are likely to occur, wear:
Protective suit
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.
- Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapors, mist or gas.
Avoid contact with skin, eyes and clothing.

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Exposure Guidelines

Isopropanol	67-63-0	NIOSH	REL	400 ppm	980 mg/m ³
		NIOSH	STEL	500 ppm	1,225 mg/m ³
		OSHA Z1	PEL	400 ppm	980 mg/m ³
		OSHA Z1A	TWA	400 ppm	980 mg/m ³
		OSHA Z1A	STEL	500 ppm	1,225 mg/m ³
		US CA OEL	TWA PEL	400 ppm	980 mg/m ³
		US CA OEL	STEL	500 ppm	1,225 mg/m ³
		ACGIH	TWA		200 ppm
		ACGIH	STEL		400 ppm
Diethylamine	109-89-7	ACGIH	TWA		5 ppm
		ACGIH	STEL		15 ppm

Skin designation:
Can be absorbed through the skin.

NIOSH	REL	10 ppm	30 mg/m ³
NIOSH	STEL	25 ppm	75 mg/m ³
OSHA Z1	PEL	25 ppm	75 mg/m ³
OSHA Z1A	TWA	10 ppm	30 mg/m ³
OSHA Z1A	STEL	25 ppm	75 mg/m ³
US CA OEL	Ceiling	5 ppm	15 mg/m ³

Skin designation:
Can be absorbed through the skin.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid, clear
Color	: colourless
Odor	: slight alcoholic

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pH	:	11.9
Melting point/range	:	not determined
Boiling point/boiling range	:	60.56 °C (141.01 °F)
Vapor pressure	:	44 hPa at 20 °C (68 °F) The physical data is that of the main component.
Relative vapour density	:	not determined, (Air = 1.0)
Density	:	0.7848 g/cm ³ at 20 °C (68 °F)
Water solubility	:	completely soluble

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks. Keep away from direct sunlight.
Materials to avoid	:	Strong acids Strong oxidizing agents Keep away from metals. Acetaldehyde Aluminium Chlorine Ethylene oxide Isocyanates Oxygen
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂)
Hazardous reactions	:	Hazardous polymerisation does not occur. Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 rat Dose: 5,045 mg/kg Test substance: Isopropanol
Acute oral toxicity	:	LD50 rat

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		Dose: 540 - 1,000 mg/kg Test substance: Diethylamine
Acute dermal toxicity	:	LD50 rabbit Dose: 12,800 mg/kg Test substance: Isopropanol
Acute dermal toxicity	:	LD50 rabbit Dose: 582 - 633 mg/kg Test substance: Diethylamine
Acute inhalation toxicity	:	LC50 rat Dose: 16000 ppm Exposure time: 8 h Test substance: Isopropanol
Acute inhalation toxicity	:	LC50 rat Dose: 12.1 - 17.3 mg/l Exposure time: 4 h Test substance: Diethylamine
Skin irritation	:	rabbit Mild skin irritation Test substance: Isopropanol
Skin irritation	:	rabbit Corrosive Test substance: Diethylamine
Eye irritation	:	rabbit Test substance: Isopropanol Severe eye irritation
Eye irritation	:	rabbit irritating Test substance: Diethylamine

SECTION 12. ECOLOGICAL INFORMATION

Biodegradability	:	Biochemical Oxygen Demand (BOD) Biochemical oxygen demand within 5 days Biodegradation: 58 % Test substance: Isopropanol
Toxicity to fish	:	LC50 Species: goldfish Dose: > 5 g/l

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		Exposure time: 24 h Test substance: Isopropanol
Toxicity to fish	:	LC50 Species: Leuciscus idus (Golden orfe) Dose: 8,970 mg/l Exposure time: 48 h Test substance: Isopropanol
Toxicity to fish	:	LC50 Species: Pimephales promelas (fathead minnow) Dose: 10,400 mg/l Exposure time: 96 h Test substance: Isopropanol
Toxicity to daphnia and other aquatic invertebrates.	:	EC50 Species: Daphnia magna (Water flea) Dose: > 100 mg/l Exposure time: 48 h Test substance: Isopropanol
Toxicity to algae	:	LC50 Species: Scenedesmus subspicatus Dose: > 2,000 mg/l Exposure time: 72 h Test substance: Isopropanol
Toxicity to bacteria	:	EC50 Species: Photobacterium phosphoreum Dose: 35,390 mg/l Exposure time: 5 min Test substance: Isopropanol
Additional ecological information	:	Should not be released into the environment. Accumulation in aquatic organisms is unlikely.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Information: Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN-Number	:	1993
	Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Isopropanol , Diethylamine)

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	Class	: 3
	Packing group	: II
	Hazard Label	: 3
IATA	UN Number	: 1993
	Description of the goods	: FLAMMABLE LIQUID, N.O.S. (Isopropanol, Diethylamine)
	Class	: 3
	Packaging group	: II
	Hazard Label	: 3
	Packing instruction (cargo aircraft)	: 307
	Packing instruction (passenger aircraft)	: 305
	Packing instruction (passenger aircraft)	: Y305
IMDG	Substance No.	: UN 1993
	Description of the goods	: FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL , DIETHYLAMINE)
	Class	: 3
	Packaging group	: II
	Hazard Label	: 3
	EmS Number	: F-E
	Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION
Inventories

- EU. EINECS : On the inventory, or in compliance with the inventory
- US. Toxic Substances Control Act : On TSCA Inventory
- Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory
- Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133) : All components of this product are on the Canadian DSL list.
- Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

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Korea. Toxic Chemical Control Law (TCCL) List : On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory

National regulatory information

SARA 313 Components : Isopropanol 67-63-0

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA Reportable Quantity : 100 lbs

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

Massachusetts RTK : Isopropanol 67-63-0
: Diethylamine 109-89-7

New Jersey RTK : Isopropanol 67-63-0
: Diethylamine 109-89-7

Pennsylvania RTK : Isopropanol 67-63-0
: Diethylamine 109-89-7

WHMIS Classification : B2
D2A
D2B

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SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health Hazard	: 2*	1
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0

Further information

* - Chronic health hazard