
1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	DIEMARK INK REMOVER 8000
Product Number:	204-8000, 204-8001
REACH Registration Number:	N/A
Identified Use:	Semiconductor Ink Removal
Uses Advised Against:	None identified
Manufacturer:	Xandex, Inc. 1360 Redwood Way, Suite A Petaluma, CA 94954 USA
Web Site:	www.xandex.com
E-Mail:	beastin@xandex.com
Information Contact:	Bill Eastin
Emergency Telephone:	(800) 535-5053 (US Domestic) +1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Emergency Overview

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids (Category 4) H227

Acute toxicity, Oral (Category 4) H302

Acute toxicity, Inhalation (Category 4) H332

Acute aquatic toxicity (Category 2)H401

Eye irritation (Category 2A) H319

Specific target organ toxicity- Single exposure (Category 3), Central nervous system, H336

GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

H227

H302 + H332

H315

H319

H401

H336

Combustible liquid

Harmful if swallowed or if inhaled

Causes skin irritation

Causes serious eye irritation

Toxic to aquatic life

May cause drowsiness or dizziness

Precautionary statements

P261

Avoid breathing fume/gas/mist/vapors/spray



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P280
P305 + P351 + P338

Wear protective gloves/protective clothing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

NFPA Rating

Health hazard	2
Fire	2
Reactivity hazard	0

HMIS Classification

Health hazard	2
Flammability	2
Physical hazard	0

Potential Health Effects

Eyes: This product can cause serious irritation to eyes on contact.
 Skin: This product can cause moderate irritation to skin on contact.
 Inhalation: Vapor or mist can cause irritation to the nose and throat. Vapors may cause drowsiness and dizziness.
 Ingestion: Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description

Alcohol Solvent Mixture

Hazardous Ingredients

Chemical name	EC-No	Index-No	CAS-No	Amount (%)	Classification
Benzyl Alcohol	202-859-9	603-057-00-5	100-51-6	65-95	Acute Tox. 4; Eye Irrit. 2A; Aquatic Acute 2; H302, H319, H401
Isopropyl Alcohol	200-661-7	603-117-00-0	67-63-0	5-35	Flam. Liq. 2; Eye Irrit. 2A; STOT SE 3; H225, H319, H336

4. FIRST AID MEASURES

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In case of eye contact:

Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician, if necessary.



In case of skin contact:

Wash with soap and plenty of water. Consult a physician.

In case of inhalation:

If breathing, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of ingestion:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES

Conditions of flammability:

Combustible liquid. Flammable in the presence of a source of ignition if heated above the flashpoint.

Suitable extinguishing media:

Use water spray, dry chemical, carbon dioxide, alcohol-resistant foam.

Hazardous combustion products:

Emits carbon oxides under fire conditions.

Special protective equipment for fire fighters:

Wear self-contained breathing apparatus if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for storage:

Keep container tightly closed in a dry, well ventilated place. Store at a temperature of 10-25°C (50-77° F) to maintain maximum shelf life.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Substance name	EC-No	CAS-No	Value	Control parameters	Basis
Benzyl alcohol	202-859-9	100-51-6	TWA	10 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
Isopropyl alcohol	200-661-7	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks: Eye and upper respiratory tract irritation. Central nervous system impairment. Not classifiable as a human carcinogen.					
			STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
			TWA	400 ppm 980 mg/m ³	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
Note: The value in mg/m ³ is approximate.					
			TWA	400 ppm 980 mg/m ³	USA. NIOSH Recommended Exposure Limits
			ST	500 ppm 1,225 mg/m ³	USA. NIOSH Recommended Exposure Limits
			PEL	400 ppm 980 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
			STEL	500 ppm 1,225 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	CAS-No	Parameters	Value	Biological specimen	Basis
2-Propanol	67-63-0	Acetone	40.0000	Urine	ACGIH- Biological Exposure Indices
Remarks: End of shift at end of workweek.					



Individual Protection Measures

Eye protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate, use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a back-up to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Skin protection

Full contact

Material: - Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min.

Material tested: Camatril® (KCL 730/Aldrich Z677442, Size M)

Splash contact:

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 60 min.

Material tested: Dermatril® P (KCL 743/Aldrich Z677388, Size M)

Body protection

Impervious clothing. The type of equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands after breaks and at the end of the workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form

Clear liquid

Color

Colorless to light yellow



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Safety Data

pH	No data available
Melting point/freezing point	No data available
Boiling point	165° C (ASTM D 1120M)
Odor	Slight alcoholic odor
Odor threshold	No data available
Flash point	82° C (Open cup) 56° C (Closed cup, ASTM D 93)
Ignition temperature	434° C
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	No data available
Water solubility	No data available
Specific gravity	1.032 @ 25° C
% Volatile/Non-Volatile (Solids)	100% Volatile
Partition coefficient	No data available
Relative vapor density	No data available
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

Chemical stability:	Hygroscopic. Stable under recommended storage conditions
Possibility of hazardous reactions:	No data available
Conditions to avoid:	A mixture of benzyl alcohol and 58% sulfuric acid decomposed violently when heated to 180° C. Benzyl alcohol containing 1.4% hydrogen bromide and 1.1% of an iron (II) salt polymerized exothermally when heated above 100° C
Hazardous Decomposition Products:	Carbon oxides form under fire conditions.
Materials to Avoid:	Strong oxidizing agents

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Benzyl alcohol

Oral LD50

LD50 Oral-rat-male- 1, 620 mg/kg (ECHA)

Isopropyl alcohol

Oral LD50

LD50 Oral-rat 5,045 mg/kg

Inhalation LC50



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LC50 Inhalation-rat 8-16,000 ppm

Dermal LD50

LD50 Dermal-rabbit 12,800 mg/kg

Skin corrosion/irritation

Benzyl alcohol

Skin-rabbit

Result: No skin irritation – 4 h

(OECD Test Guideline 404)

Isopropyl alcohol

Skin-rabbit-Mild skin irritation

Serious eye damage / eye irritation

Benzyl alcohol

Eyes – Rabbit

Result: irritating

(OECD Test Guideline 405)

Isopropyl alcohol

Eyes-rabbit-Eye irritation-24 h

Respiratory or skin sensitization

Benzyl Alcohol

Maximization Test

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA

Reproductive toxicity

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No data available

Teratogenicity

No data available

Specific target organ toxicity- single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity- repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Synergistic effects

No data available

Potential health effects

Ingestion

Harmful if swallowed.

Inhalation

May be harmful if inhaled. Causes respiratory tract irritation.

Skin

Causes skin irritation.

Eyes

Causes eye irritation.

Signs and Symptoms of Exposure

Central nervous system depression. Prolonged or repeated exposure can cause: Headache, dizziness, vomiting, fatigue.

12. ECOLOGICAL INFORMATION

Toxicity

Benzyl alcohol

Toxicity to fish

Static test LC50- Pimephales promelas (Fathead minnow)- 460 mg /l – 96 h (US-EPA)

Toxicity to daphnia and other aquatic invertebrates

Immobilization EC50- Daphnia magna (Water flea)- 230 mg /l – 48 h (OECD Test Guideline 202)

Toxicity to algae

Static test ErC50 - Pseudokirchneriella subcapitata (green algae) – 700 mg/l – 72 h (OECD Test Guideline 201)

Isopropyl alcohol

Toxicity to fish

LC50- Pimephales promelas (Fathead Minnow)- 9,640 mg /l – 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50- Daphnia magna (Water Flea)- 5,102 mg /l – 24 h

Toxicity to algae

EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h



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EC50 - Algae - > 1,000.00 mg/l - 24 h

Persistence and degradability

Benzyl alcohol

Biodegradability

aerobic - Exposure time 14 d

Result: 92-96% - Readily biodegradable
(OECD Test Guideline 301C)

aerobic - Exposure time 21 d Result: 95 - 97 % - Readily
biodegradable. (OECD Test Guideline 301A)

Biochemical Oxygen
Demand (BOD)

1,550 mg/g

Remarks: (Lit.)

Theoretical oxygen
demand

2,515 mg/g

Remarks: (IUCLID)

Ratio BOD/ThBOD

62 %

Remarks: (Lit.)

Isopropyl alcohol

No data available

Bioaccumulative potential

Benzyl Alcohol

No data available

Isopropyl Alcohol

No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.



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14. TRANSPORT INFORMATION

DOT (US)

UN Number: 1987 Alcohols n.o.s., Packing Class III
Poison inhalation hazard : No

IATA

UN Number: 1987 Alcohols n.o.s., Packing Class III

IMDG

Not dangerous goods.

15. REGULATORY INFORMATION

OSHA Hazards

Combustible Liquid, Target Organ Effect, Harmful by ingestion or inhalation, Irritant

CERCLA Status:

Not listed

TSCA Status:

All chemicals used in this product are TSCA Listed

SARA 302:

This product contains no chemicals subject to the notification under SARA Title III, Section 302.

SARA 311/312 Hazards

Acute health hazard, chronic health hazard.

SARA 313:

The following component is subject to reporting levels established in SARA Title III, Section 313.

	CAS No.
Isopropanol	67-63-0

Massachusetts Right To Know Components

	CAS No.
Isopropanol	67-63-0
Benzyl Alcohol	100-51-6

Pennsylvania Right To Know Components

	CAS No.
Isopropanol	67-63-0
Benzyl Alcohol	100-51-6



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New Jersey Right To Know Components

	CAS No.
Isopropanol	67-63-0
Benzyl Alcohol	100-51-6

California Prop. 65 Components

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

German Regulation

Water-endangering substances (WGK [water hazard class]): 1

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Xandex Incorporated shall not be held liable for any damage resulting from handling or from contact with the above product.

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