Safety Data Sheet

Version 3.3
Revision Date: 11/04/16
Print Date: 11/04/16
Replaces: Version 3.2 Dated 03/01/16

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	8103 WHITE INK
Product Number:	201-8115
REACH Registration Number:	N/A
Identified Use:	Marking ink for semiconductors
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) (352) 323-3500 (International)

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Irritant, Harmful by ingestion, Harmful by skin absorption

Target Organs
Central nervous system

GHS Classification
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Skin irritation (Category 2)
Acute aquatic toxicity (Category 2)
Reproductive toxicity (Category 1B)

GHS Label elements, including precautionary statements
Pictogram

Signal Word — Warning

Hazard statements

H302 + H312	Harmful if swallowed or in contact with skin
H315	Causes skin irritation
H332	Harmful if inhaled
H360	May damage fertility or the unborn child

H401	Toxic to aquatic life
Precautionary statements	
P280	Wear protective gloves

NFPA Rating

Health hazard	2
Fire	1
Reactivity hazard	1

HMIS Classification

Health hazard	2
Flammability	1
Physical hazard	1

Potential Health Effects

Eyes:	Causes eye irritation.
Skin:	Harmful if absorbed through skin. Causes skin irritation.
Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion:	Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description
Phenoxy resin and dye based ink mixture.

Hazardous Ingredients

Chemical name	EC-No	Index-No	CAS-No	Amount (%)	Classification according to Regulation (EC) No 1272/2008 (CLP)	Classification according to 67/548/EEC
Benzyl Alcohol	202-859-9	603-057-00-5	100-51-6	60-90	H302 + 312, H315, H332, H401, P280	R20/22, Xn
Propylene Glycol Monomethyl Ether Acetate	108-65-6	607-195-00-7	203-603-9	2	H226, H360, H402, P201, P308+P313	
Titanium Dioxide			13463-67-7	4-10	H315, H319, H332, H335, P261, P305+P351+P338	Xn, R20-36/37/38, S24-25

4. FIRST AID MEASURES

In case of eye contact:
Flush eyes with water as a precaution.

In case of skin contact:
Wash with soap and plenty of water.

In case of inhalation:
If breathed in, remove person to fresh air.

In case of ingestion:
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:
Use water spray, dry chemical, CO_2, 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:
Wear protective clothing and gloves. 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 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:
Store at a temperature of 10-25°C (50-77o F) to maintain maximum shelf life.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Limit value type (country of origin)	Substance name	EC-No	CAS-No	Occupational exposure limit value	Source
TWA (USA)	Benzyl alcohol	202-859-9	100-51-6	10 ppm	Workplace Environmental Exposure Levels (WEEL)
TWA (USA)	Propylene Glycol Monomethyl Ether Acetate	108-65-6	203-603-9	50 ppm	Workplace Environmental Exposure Levels (WEEL)
TWA (USA)	Titanium Dioxide		13463-67-7	15 mg/m3	OSHA (PEL)

Exposure controls

Eye protection
Safety goggles

Respiratory protection
For continuous exposure to large quantities, wear respirator (CEN/NIOSH approved) as required for concentrations of air contaminants encountered.

Skin protection
Chemical resistant gloves. Avoid repeated or prolonged skin exposure.

Hygiene measures
Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Opaque liquid
Color:	White
Odor:	Slight alcoholic odor
Flash Point:	>60° C
Specific Gravity:	1.13 (Water = 1)
% Volatile/Non-Volatile (Solids):	72% Volatile / 28% Non-Volatile

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions

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

Materials to Avoid: Strong oxidizing agents

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Benzyl Alcohol

Oral LD50

LD50 Oral-rat-1,230 mg/kg

Inhalation LC50

No data available

Dermal LD50

LD50 Dermal-rabbit-2,000 mg/kg

Propylene Glycol Monomethyl Ether Acetate

Oral LD50

LD50 Oral-rat- 8,532 mg/kg

Dermal LD50

LD50 Dermal-rabbit- >5,000 mg/kg

Skin corrosion/irritation

Benzyl Alcohol

Skin-rabbit-irritating to skin-24h

Propylene Glycol Monomethyl Ether Acetate

Skin-rabbit-no irritation

Serious eye damage / eye irritation

No data available

Respiratory or skin sensitization

Propylene Glycol Monomethyl Ether Acetate

Maximisation Test - guinea pig – Did not cause sensitization

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
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

Potential health effects

Ingestion	Harmful if swallowed.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
Central nervous system depression.

Synergistic effects
No data available

12. ECOLOGICAL INFORMATION

Toxicity

Benzyl Alcohol

Toxicity to fish	LC50- Lepomis macrochirus (Bluegill)- 10 mg /l – 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50- Daphnia magna (Water Flea)- 55 mg /l – 24 h

Propylene Glycol Monomethyl Ether Acetate

Toxicity to fish	LC50- Salmo gairdneri – 100-180 mg /l – 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50- Daphnia magna (Water Flea)- >500 mg /l – 48 h

Persistance and degradability

Benzyl Alcohol

Biodegradability	Biotic/Aerobic Result: 92-96% - Readily biodegradable

Propylene Glycol Monomethyl Ether Acetate

Biodegradability	Biotic/Aerobic Result: 100% - Readily biodegradable

Bioaccumulative potential
No data available

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

Contact a professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations in the jurisdiction where the product is used.

14. TRANSPORT INFORMATION

DOT (US)

UN Number:	N/A
Marine pollutant:	No
Poison inhalation hazard:	No

Not dangerous goods

IATA

UN Number:	N/A

Not dangerous goods

IMDG

Not dangerous goods.

15. REGULATORY INFORMATION

OSHA Hazards

Target Organ Effect, Harmful by ingestion, Harmful by skin absorbtion, 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:

This product contains no chemicals subject to the notification under SARA Title III, Section 313.

Massachusetts Right To Know Components

	CAS No.	Revision Date
Benzyl Alcohol	100-51-6	1993-04-24
Titanium Dioxide	13463-67-7	

Pennsylvania Right To Know Components

	CAS No.	Revision Date
Benzyl Alcohol	100-51-6	1993-04-24
Propylene Glycol Monomethyl Ether Acetate	108-65-6	
Titanium Dioxide	13463-67-7	

New Jersey Right To Know Components

	CAS No.	Revision Date
Benzyl Alcohol	100-51-6	1993-04-24
Titanium Dioxide	13463-67-7	

German Regulations

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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