

SAFETY DATA SHEET

Issuing Date 02/24/2010

Revision Date 06-Mar-2015

Revision Number 1



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Ultra Perm Opaque Ink

Other means of identification

UN-No. UN1210

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Professional Use Only

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Pro Colorflex Ink Corp
Supplier Address 3588 Arden Road
Hayward
CA
94545
US
Supplier Phone Number Phone:800-485-2605
Fax:510-293-3038
Contact Phone510-293-3033
Supplier Email sales@procolorflex.com
Emergency telephone number 800-485-2605 M – F 8:00 AM – 4:30 PM

2. HAZARDS IDENTIFICATION

Classification




This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Germ cell mutagenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 3

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger		
Hazard Statements			
Harmful if swallowed			
Harmful if inhaled			
Causes skin irritation			
Causes serious eye damage			
May cause genetic defects			
Suspected of damaging fertility or the unborn child			
May cause respiratory irritation. May cause drowsiness or dizziness			
May cause damage to organs through prolonged or repeated exposure			
Flammable liquid and vapor			
			
Appearance	Color	Physical State	Liquid
			Odor Alcohol

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ ventilating/ lighting/ equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician

Skin

If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

15% of the mixture consists of ingredient(s) of unknown toxicity

Other information

May be harmful in contact with skin
Harmful to aquatic life with long lasting effects
PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION
INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
2-Butoxyethanol	111-76-2	15 - 40	*
n-Propyl alcohol	71-23-8	10 - 30	*
Titanium dioxide	13463-67-7	10 - 30	*
n-Butyl alcohol	71-36-3	10 - 30	*
Carbon black	1333-86-4	10 - 30	*
Ethyl alcohol	64-17-5	5 - 10	*
Toluene	108-88-3	3 - 7	*
Isopropyl alcohol	67-63-0	3 - 7	*
Solvent naphtha (petroleum), light aliphatic	64742-89-8	1 - 5	*
Propylene glycol propyl ether	1569-01-3	1 - 5	*
n-Propyl acetate	109-60-4	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Seek immediate medical attention/advice.

Skin Contact

Get medical attention if irritation develops and persists. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen.

Ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.



5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient. Do not use dry chemical extinguishers to control fires involving nitromethane or nitroethane. Do not use straight streams.

Specific Hazards Arising from the Chemical

Vapors can form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.

Uniform Fire Code

Irritant: Liquid
Toxic: Liquid
Flammable Liquid: I-C

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

Move containers from fire area if you can do it without risk.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.

Other Information

Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Environmental Precautions

Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for Containment

A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Methods for cleaning up

Use clean non-sparking tools to collect absorbed material. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Use personal protection equipment. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

Incompatible Products

Strong oxidizing agents. Strong bases. Chlorinated compounds. Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
n-Propyl alcohol 71-23-8	TWA: 100 ppm	TWA: 200 ppm TWA: 500 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 500 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 625 mg/m ³	IDLH: 800 ppm TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 625 mg/m ³
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³
n-Butyl alcohol 71-36-3	TWA: 20 ppm	TWA: 100 ppm TWA: 300 mg/m ³ (vacated) S* (vacated) Ceiling: 50 ppm (vacated) Ceiling: 150 mg/m ³	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m ³
Carbon black 1333-86-4	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH



Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m ³ Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m ³ TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m ³
n-Propyl acetate 109-60-4	STEL: 250 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 840 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 840 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 1050 mg/m ³	IDLH: 1700 ppm TWA: 200 ppm TWA: 840 mg/m ³ STEL: 250 ppm STEL: 1050 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves. Chemical resistant apron. Antistatic boots.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Liquid	Odor	Alcohol
Appearance	Color	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
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pH	UNKNOWN	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	23 C / 73 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Insoluble in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Excessive heat. Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents. Strong bases. Chlorinated compounds. Acids.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
Eye Contact	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
Skin Contact	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to skin. Prolonged contact may cause redness and irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed. (based on components).

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 220 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
n-Propyl alcohol 71-23-8	= 1870 mg/kg (Rat)	-	> 13548 ppm (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-
n-Butyl alcohol 71-36-3	-	-	= 8000 ppm (Rat) 4 h
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
Ethyl alcohol 64-17-5	-	-	= 124.7 mg/L (Rat) 4 h
Toluene 108-88-3	= 636 mg/kg (Rat)	= 8390 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h > 26700 ppm (Rat) 1 h
Isopropyl alcohol 67-63-0	= 4396 mg/kg (Rat)	= 12800 mg/kg (Rabbit)	= 16000 ppm (Rat) 8 h
Solvent naphtha (petroleum), light aliphatic 64742-89-8	-	= 3000 mg/kg (Rabbit)	-
n-Propyl acetate 109-60-4	= 9370 mg/kg (Rat)	> 20 mL/kg (Rabbit)	-

Information on toxicological effects

Symptoms	Erythema (skin redness). May cause redness and tearing of the eyes. May cause blindness. Burning. Coughing and/ or wheezing.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic Effects	Contains a known or suspected mutagen.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol 111-76-2	A3	Group 3		
Titanium dioxide 13463-67-7		Group 2B		X
Carbon black 1333-86-4	A3	Group 2B		X
Ethyl alcohol 64-17-5	A3	Group 1	Known	X
Toluene 108-88-3		Group 3		
Isopropyl alcohol 67-63-0		Group 3		X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive Toxicity

Product is or contains a chemical which is a known or suspected reproductive hazard. Contains a known or suspected reproductive toxin.

STOT - single exposure

No information available.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

Chronic Toxicity

Contains a known or suspected mutagen. Possible risk of irreversible effects. Contains a known or suspected reproductive toxin. Avoid repeated exposure. Prolonged exposure may cause chronic effects. Contains toluene. Exposure to toluene in animals via inhalation and intentional overexposure to toluene in humans has caused adverse fetal development effects. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. Carbon black has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product. Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product.

Target Organ Effects

Respiratory system. Eyes. Skin. May affect the genetic material in germ cells (sperm and eggs). Gastrointestinal tract (GI). Reproductive System. Blood. Central Nervous System (CNS). Hematopoietic system. Kidney. Liver. Lungs. Lymphatic System. Spleen. Systemic Toxicity.

Aspiration Hazard

No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

665.00 mg/kg

ATEmix (dermal)

2,706.00 mg/kg (ATE)

ATEmix (inhalation-gas)

11,953.00 ppm (4 hr)

ATEmix (inhalation-dust/mist)

3.90 mg/l

ATEmix (inhalation-vapor)

28.32 ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
2-Butoxyethanol 111-76-2		96h LC50: = 1490 mg/L (Lepomis macrochirus) 96h LC50: = 2950 mg/L (Lepomis macrochirus)		48h EC50: > 1000 mg/L 24h EC50: 1698 - 1940 mg/L
n-Propyl alcohol 71-23-8		96h LC50: = 4480 mg/L (Pimephales promelas)	EC50 = 17700 mg/L 5 min EC50 = 45000 mg/L 5 h EC50 = 8686 mg/L 15 min EC50 = 980 mg/L 12 h	48h EC50: 3339 - 3977 mg/L 48h EC50: = 3642 mg/L
n-Butyl alcohol 71-36-3	72h EC50: > 500 mg/L (Desmodesmus subspicatus) 96h EC50: > 500 mg/L (Desmodesmus subspicatus)	96h LC50: 1730 - 1910 mg/L (Pimephales promelas) 96h LC50: = 1910000 µg/L (Pimephales promelas) 96h LC50: 100000 - 500000 µg/L (Lepomis macrochirus) 96h LC50: = 1740 mg/L (Pimephales promelas)	EC50 = 2041.4 mg/L 5 min EC50 = 2186 mg/L 30 min EC50 = 3980 mg/L 24 h EC50 = 4400 mg/L 17 h	48h EC50: = 1983 mg/L 48h EC50: 1897 - 2072 mg/L
Carbon black 1333-86-4				24h EC50: > 5600 mg/L
Ethyl alcohol 64-17-5		96h LC50: > 100 mg/L (Pimephales promelas) 96h LC50: 13400 - 15100 mg/L (Pimephales promelas) 96h LC50: 12.0 - 16.0 mL/L (Oncorhynchus mykiss)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	48h LC50: 9268 - 14221 mg/L 48h EC50: = 2 mg/L 24h EC50: = 10800 mg/L
Toluene 108-88-3	96h EC50: > 433 mg/L (Pseudokirchneriella subcapitata) 72h EC50: = 12.5 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 15.22 - 19.05 mg/L (Pimephales promelas) 96h LC50: 5.89 - 7.81 mg/L (Oncorhynchus mykiss) 96h LC50: 14.1 - 17.16 mg/L (Oncorhynchus mykiss) 96h LC50: = 12.6 mg/L (Pimephales promelas) 96h LC50: = 5.8 mg/L (Oncorhynchus mykiss) 96h LC50: 11.0 - 15.0 mg/L (Lepomis macrochirus) 96h LC50: = 54 mg/L (Oryzias latipes) 96h LC50: = 28.2 mg/L (Poecilia reticulata) 96h LC50: 50.87 - 70.34 mg/L (Poecilia reticulata)	EC50 = 19.7 mg/L 30 min	48h EC50: 5.46 - 9.83 mg/L 48h EC50: = 11.5 mg/L
Isopropyl alcohol 67-63-0	96h EC50: > 1000 mg/L (Desmodesmus subspicatus) 72h EC50: > 1000 mg/L (Desmodesmus subspicatus)	96h LC50: > 1400000 µg/L (Lepomis macrochirus) 96h LC50: = 11130 mg/L (Pimephales promelas) 96h LC50: = 9640 mg/L (Pimephales promelas)		48h EC50: = 13299 mg/L
Solvent naphtha (petroleum), light aliphatic 64742-89-8	72h EC50: = 4700 mg/L (Pseudokirchneriella subcapitata)			
n-Propyl acetate 109-60-4		96h LC50: 56 - 64 mg/L (Pimephales promelas)		24h EC50: = 318 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
2-Butoxyethanol 111-76-2	0.81
n-Propyl alcohol 71-23-8	0.34
n-Butyl alcohol 71-36-3	0.785
Ethyl alcohol 64-17-5	-0.32
Toluene 108-88-3	2.65
Isopropyl alcohol 67-63-0	0.05

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number D001 U031 U112 U220

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
n-Butyl alcohol 71-36-3		Included in waste stream: F039		U031
Toluene 108-88-3	U220	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151		U220

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Toluene 108-88-3			Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
n-Propyl alcohol 71-23-8	Toxic Ignitable
n-Butyl alcohol 71-36-3	Toxic
Ethyl alcohol 64-17-5	Toxic Ignitable
Toluene 108-88-3	Toxic Ignitable
Isopropyl alcohol 67-63-0	Toxic Ignitable
n-Propyl acetate 109-60-4	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT
UN-No.

UN1210



Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
Description	UN1210, PRINTING INK, 3, I
Emergency Response Guide Number	129

TDG

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
Description	UN1210, PRINTING INK, 3, I

MEX

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
Description	UN1210, PRINTING INK, 3, I

ICAO

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
Description	UN1210, PRINTING INK, 3, I

IATA

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
Description	UN1210, PRINTING INK, 3, I

IMDG/IMO

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
EmS-No.	F-E, S-D
Description	UN1210, PRINTING INK, 3, I, (23°C C.C.)

RID

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I
Classification code	F1
Description	UN1210, PRINTING INK, 3, I

ADR

UN-No.	UN1210
Proper Shipping Name	PRINTING INK
Hazard Class	3
Packing Group	I

Classification code F1
Tunnel restriction code (D/E)
Description UN1210, PRINTING INK, 3, I

ADN

UN-No. UN1210
Proper Shipping Name PRINTING INK
Hazard Class 3
Packing Group I
Classification code F1
Special Provisions 163
Description UN1210, PRINTING INK, 3, I
Limited Quantity 500 ML
Ventilation VE01

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
2-Butoxyethanol - 111-76-2	111-76-2	15 - 40	1.0
n-Butyl alcohol - 71-36-3	71-36-3	10 - 30	1.0
Toluene - 108-88-3	108-88-3	3 - 7	1.0
Isopropyl alcohol - 67-63-0	67-63-0	3 - 7	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard Yes
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
n-Butyl alcohol 71-36-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Toluene 108-88-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen
Carbon black - 1333-86-4	Carcinogen
Ethyl alcohol - 64-17-5	Carcinogen Developmental
Toluene - 108-88-3	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
2-Butoxyethanol 111-76-2	X	X	X	X	X
n-Propyl alcohol 71-23-8	X	X	X		
Titanium dioxide 13463-67-7	X	X	X		
n-Butyl alcohol 71-36-3	X	X	X	X	
Carbon black 1333-86-4	X	X	X		X
Nitrocellulose 9004-70-0	X	X	X		X
Ethyl alcohol 64-17-5		X			
Isopropyl alcohol 67-63-0	X	X	X	X	
Toluene 108-88-3	X	X	X	X	X
n-Propyl acetate 109-60-4	X	X	X		
Ethyl acetate 141-78-6	X	X	X	X	

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
2-Butoxyethanol 111-76-2 (15 - 40)		Mexico: TWA 26 ppm Mexico: TWA 120 mg/m ³ Mexico: STEL 75 ppm Mexico: STEL 360 mg/m ³
n-Propyl alcohol 71-23-8 (10 - 30)		Mexico: TWA 200 ppm Mexico: TWA 500 mg/m ³ Mexico: STEL 250 ppm Mexico: STEL 625 mg/m ³
Titanium dioxide 13463-67-7 (10 - 30)		Mexico: TWA= 10 mg/m ³ Mexico: STEL= 20 mg/m ³
n-Butyl alcohol 71-36-3 (10 - 30)		Mexico: Ceiling 50 ppm Mexico: Ceiling 150 mg/m ³



Carbon black 1333-86-4 (10 - 30)		Mexico: TWA 3.5 mg/m ³ Mexico: STEL 7 mg/m ³
Ethyl alcohol 64-17-5 (5 - 10)		Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m ³
Toluene 108-88-3 (3 - 7)		Mexico: TWA 50 ppm Mexico: TWA 188 mg/m ³
Isopropyl alcohol 67-63-0 (3 - 7)		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m ³ Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m ³
n-Propyl acetate 109-60-4 (1 - 5)		Mexico: TWA 200 ppm Mexico: TWA 840 mg/m ³ Mexico: STEL 250 ppm Mexico: STEL 1050 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

- B2 - Flammable liquid
- D2A - Very toxic materials
- D2B - Toxic materials



16. OTHER INFORMATION

NFPA	Health Hazards 3	Flammability 3	Instability 0	Physical and Chemical Hazards -
HMIS	Health Hazards 3 *	Flammability 3	Physical Hazard 0	Personal Protection X

Chronic Hazard Star Legend * = Chronic Health Hazard

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Disclaimer

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End of Safety Data Sheet

