

SAFETY DATA SHEET

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Revision Number 3



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

Product identifier

Product Name Color Philosophy Permanent Ink
#596781,596804,596835,599607,599614,599638,599645,599652

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Professional Use Only
Uses advised against No information available

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
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements**Emergency Overview**

Signal word	Warning		
Hazard Statements			
Harmful if swallowed			
Causes serious eye irritation			
May cause damage to organs through prolonged or repeated exposure			
			
Appearance	Color	Physical State	Liquid
		Odor	Faint hydrocarbon

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear eye/face protection

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention

Ingestion

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

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

20% of the mixture consists of ingredient(s) of unknown toxicity

Other information

May be harmful in contact with skin

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Diethylene glycol monobutyl ether	112-34-5	30 - 60	*
Diethylene glycol	111-46-6	15 - 40	*
Titanium dioxide	13463-67-7	10 - 30	*

*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.

Eye Contact

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

Skin Contact

Wash with soap and water.

Inhalation

Remove to fresh air.

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.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

No information available.

Uniform Fire Code

Irritant: Liquid
Combustible Liquid: III-B

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.

Other Information

Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions

Environmental Precautions

Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

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.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Diethylene glycol monobutyl ether 112-34-5	TWA: 10 ppm inhalable fraction and vapor	-	
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

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 If splashes are likely to occur. Wear safety glasses with side shields (or goggles). None required for consumer use.

Skin and Body Protection Wear protective gloves and protective clothing.

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.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State Appearance Color	Liquid Color Various Colors	Odor Odor Threshold	Faint hydrocarbon No information available
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<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	UNKNOWN	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	250 °C / 300 °F	None known	
Flash Point	> 250 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	1.0 – 1.3	None known	
Water Solubility	Partially soluble	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 VOC Content (%) Particle Size Particle Size Distribution	No data available No data available No data available
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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

None known based on information supplied.

Incompatible materials

None known based on information supplied.

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.
Eye Contact	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. May cause redness, itching, and pain. May cause temporary eye irritation.
Skin Contact	Specific test data for the substance or mixture is not available. May cause irritation. 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
Diethylene glycol monobutyl ether 112-34-5	= 3384 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-
Diethylene glycol 111-46-6	= 12565 mg/kg (Rat)	= 11890 mg/kg (Rabbit)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. This product contains titanium dioxide which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is a liquid.

Chemical Name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7		Group 2B		X

*IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present*

Reproductive Toxicity No information available.

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 Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse liver effects.

Target Organ Effects Eyes. Respiratory system. Skin. Gastrointestinal tract (GI). Lungs. Kidney. Liver.

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)
1,091.00 mg/kg
ATEmix (dermal)
4,768.00 mg/kg (ATE)



12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Diethylene glycol monobutyl ether 112-34-5	96h EC50: > 100 mg/L (Desmodesmus subspicatus)	96h LC50: = 1300 mg/L (Lepomis macrochirus)		24h EC50: = 2850 mg/L 48h EC50: > 100 mg/L
Diethylene glycol 111-46-6		96h LC50: = 75200 mg/L (Pimephales promelas)	EC50 = 29228 mg/L 15 min	48h EC50: = 84000 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
Diethylene glycol 111-46-6	-1.98

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT
 Proper Shipping Name
 Hazard Class

NOT REGULATED
 NON REGULATED
 N/A

TDG
 Not regulated

MEX
 Not regulated

ICAO
 Not regulated



<u>IATA</u>	Not regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
<u>IMDG/IMO</u>	Not regulated
Hazard Class	N/A
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

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 %
Diethylene glycol monobutyl ether - 112-34-5	112-34-5	30 - 60	1.0

SARA 311/312 Hazard Categories

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

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

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



U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Diethylene glycol monobutyl ether 112-34-5			X	X	X
Diethylene glycol 111-46-6			X		
Titanium dioxide 13463-67-7	X	X	X		

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Titanium dioxide 13463-67-7 (10 - 30)		Mexico: TWA= 10 mg/m ³ Mexico: STEL= 20 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

D2B - Toxic materials



16. OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 1	Instability 0	Physical and Chemical Hazards - Personal Protection X
HMIS	Health Hazards 2 *	Flammability 1	Physical Hazard 0	

Chronic Hazard Star Legend * = Chronic Health Hazard

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. While the information is believed to be accurate, Pro ColorFlex Ink Corporation makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Pro ColorFlex Ink Corporation's control and therefore users are responsible to verify this data under their own operating conditions to determine if the product is suitable for their particular purposes, and they assume all risks of their use, safe handling, processing, storage, transportation, disposal and release of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

