

DPI-55/24 Green Ink

SDS Number: 80331D

Revision Date: 11/7/2015

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1**PRODUCT AND COMPANY IDENTIFICATION****Manufacturer**

Dell Marking Systems
938 Featherstone Street
Pontiac, MI 48306

Phone: (248) 547-7750
Fax: (248) 544-9115
Web: www.dellid.com

Product Name: DPI-55/24 Green Ink
Revision Date: 11/7/2015
Version: 0
SDS Number: 80331D
Common Name: Marking Ink
CAS Number: Mixture
Product Code: 80331D
EPA Number: Not applicable
Product Use: Identification marking ink

Emergency Telephone Number (24 Hour)
Chemtrec 1-800-424-9300 • Outside the U.S. 703-741-5970 • Account #: CCN 6452

2**HAZARDS IDENTIFICATION**

Route of Entry: Eyes; Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately. Ingestion; If large quantities of this material are swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person Inhalation; Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Skin; Flush skin with plenty of water. Remove contaminated clothing and shoes.

Target Organs: Prolonged or repeated contact may cause skin sensitization or dermatitis. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Ethanol is known to cause developmental reproductive toxicity. Intentional misuse by deliberately concentrating or inhaling this product may be harmful or fatal.

Inhalation: High concentrations of vapors may produce irritation of the respiratory tract, headache, dizziness, and nausea

Skin Contact: Liquid is mildly irritating to the skin.








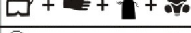

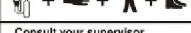













Eye Contact: Liquid is moderately irritating to the eyes.

Ingestion: Ingestion of liquid may cause vomiting.

HMIS III:

H2/F3/PH1

HMIS III	
HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARDS	1
PERSONAL PROTECTION B Safety Glasses, Gloves	

PERSONAL PROTECTION INDEX			
A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for "SPECIAL" handling directions
A		n	
o		p	
q		r	
s		Additional Information	
t		u	
w		y	
z			

 GHS Signal Word:
DANGER

GHS Hazard Pictograms:



GHS Classifications:

- Physical, Flammable Liquids, 2
- Health, Acute toxicity, 4 Oral
- Health, Skin corrosion/irritation, 2
- Health, Acute toxicity, 4 Inhalation
- Health, Reproductive toxicity, 2
- Health, Specific target organ toxicity - Repeated exposure, 2

GHS Phrases:

- H225 - Highly flammable liquid and vapor
- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H332 - Harmful if inhaled
- H361 - Suspected of damaging fertility or the unborn child
- H373 - May cause damage to organs through prolonged or repeated exposure

GHS Precautionary Statements:

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/light/equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+352 - IF ON SKIN: Wash with soap and water.

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P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P314 - Get Medical advice/attention if you feel unwell.
P330 - Rinse mouth.
P332+313 - If skin irritation occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P370+378 - In case of fire: Use water spray, carbon dioxide, dry chemical or foam for extinction.
P403+235 - Store in a well ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Percentage	Chemical Name
64-17-5	20-30%	Ethanol
112-34-5	20-30%	Diethylene glycol monobutyl ether
2807-30-9	10-20%	Ethanol, 2-propoxy-
108-88-3	5-10%	Toluene
141-78-6	1-05%	Ethyl acetate
13463-67-7	1-05%	Titanium dioxide
1330-20-7	1-05%	Xylene (mixed isomers)
108-10-1	1-05%	Methyl isobutyl ketone
123-86-4	1-05%	n-Butyl acetate
67-63-0	1-05%	Isopropyl alcohol
67-56-1	1-05%	Methanol
100-41-4	0.1-1%	Ethyl benzene

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FIRST AID MEASURES

Inhalation: Remove to fresh air and keep in a position comfortable for breathing. Respiratory problems: consult a doctor/medical service.

Skin Contact: Flush skin with plenty of water. Remove contaminated clothing and shoes.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion: If large quantities of this material are swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person. Do NOT induce vomiting or attempt chemical neutralization.

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FIRE FIGHTING MEASURES

Flammability: Extinguishing media: Suitable extinguishing media : Use water fog, Alcohol-resistant foam, Carbon dioxide, or Dry chemical powder. Use media suitable for surrounding fire. Special hazards arising from the substance or mixture: Fire hazard, highly flammable liquid and vapor. Gas/vapour flammable with air within explosion limits. Gas/vapour spreads at floor level: ignition hazard. Stay upwind of a fire to minimize breathing of vapors, gases, fumes, or decomposition products. Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Advice for firefighters: Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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Flash Point: 24 F
Flash Point Method: Tag Closed Cup (TCC)
Burning Rate: No Data Available
Autoignition Temp: No Data Available
LEL: 12
UEL: 36

6 ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb liquid with non-combustible floor absorbent and place in non-leaking container; seal properly and dispose of properly in compliance with federal, state, and local regulations.

LARGE SPILL: Evacuate area of unprotected personnel. Eliminate all ignition sources. Stop spill at source if safe to do so. Handling equipment must be grounded to prevent sparking and static discharge. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Dispose of properly in compliance with federal, state, and local regulations.

7 HANDLING AND STORAGE

Handling Precautions: 7.1. Precautions for safe handling, additional hazards when processed :
 Handle empty containers with care because vapors are potentially flammable. In use, may form flammable vapour-air mixture.
 Precautions for safe handling : Use personal protective equipment as required. Use only in well-ventilated areas. Use earthed equipment. Take precautionary measures against static discharge. Safety showers and eye wash fountains should be readily available in handling and storage areas. No naked lights. No smoking. Keep containers away from heat and open flame. Avoid breathing vapours/mist/spray.
 Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product.

Storage Requirements: Keep away from heat, sparks and open flames. Keep out of reach of children. Keep container tightly sealed when not in use. Store in a cool, well-ventilated place away from incompatible materials.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Engineering Controls: Local exhaust not usually needed.
 Mechanical (General): General area ventilation is recommended.

Personal Protective Equip: HMIS PP, B | Safety Glasses, Gloves
 Personal protective equipment : Avoid all unnecessary exposure.
 Eye protection : Wear chemical splash goggles in compliance with OSHA regulation if splashing is possible or when transfilling or breaking transfer connections.
 Hand protection : Chemical resistant gloves if skin contact is possible. Nitrile gloves or consult your safety equipment supplier.
 Skin and body protection : Protective clothing not usually necessary. For bulk material, if direct contact is possible, wear apron, boots, face shield, etc. as needed.
 Work/Hygienic Practices: Follow label instructions. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

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USA ACGIH STEL (ppm) 1000 ppm; USA OSHA PEL (TWA) (ppm) 1000 ppm

2-(2-butoxyethoxy)ethanol (112-34-5)

USA ACGIH TWA (ppm) 10 ppm

2-Propoxy ethanol (2807-30-9)

Eastman Chemical occupational exposure limit (TWA) (ppm) 25 ppm

Toluene (108-88-3)

USA ACGIH TWA (ppm) 20 ppm; USA OSHA PEL (TWA) (ppm) 200 ppm; USA OSHA PEL (Ceiling) (ppm) 300 ppm; USA OSHA Remark 500 ppm 10 minute peak per 8-hr shift.

Ethyl Acetate (141-78-6) USA ACGIH (TWA) (ppm) 400 ppm; USA OSHA PEL (TWA) (ppm) 400 ppm; USA NIOSH REL (TWA) (ppm) 400 ppm**Titanium Dioxide (13463-67-7)**USA ACGIH TWA (ppm) 10 mg/m³ ; USA ACGIH STEL (ppm) 10 mg/m³ ; USA OSHA PEL (TWA) (ppm) 15 mg/m³**Xylene (1330-20-7)**

USA ACGIH TWA (ppm) 100 ppm; USA ACGIH STEL (ppm) 150 ppm; USA OSHA PEL (TWA) 100 ppm; USA NIOSH REL (TWA) (ppm) 100 ppm; USA NIOSH REL (STEL) (ppm) 150 pp

Methyl Isobutyl Ketone (108-10-1)

USA ACGIH TWA (ppm) 20 ppm; USA ACGIH STEL (ppm) 75 ppm; USA ACGIH Remark (ACGIH) URT irr; dizziness; headache; USA OSHA PEL (TWA) (ppm) 100 ppm; USA NIOSH REL (TWA) (ppm) 50 ppm; USA NIOSH REL (STEL) (ppm) 75 ppm.

N-Butyl Acetate (123-86-4)

USA ACGIH TWA (ppm) 150 ppm; USA ACGIH STEL (ppm) 200 ppm; USA OSHA PEL (TWA) (ppm) 150 ppm

Isopropyl Alcohol (67-63-0)

USA ACGIH TWA (ppm) 200 ppm; USA ACGIH STEL (ppm) 400 ppm; USA OSHA PEL (TWA) (ppm) 400 ppm; USA NIOSH REL (TWA) (ppm) 400 ppm; USA NIOSH REL (STEL) (ppm) 500 ppm.

Methyl Alcohol (67-56-1) USA ACGIH (TWA) (ppm) 200 ppm; ACGIH-TLV STEL 250 (ppm); OSHA PEL (TWA) (ppm) 200 ppm.**Ethyl Benzene (100-41-4)**

USA ACGIH TWA (ppm) 20 ppm; USA ACGIH STEL (ppm) 125 ppm; USA OSHA PEL (TWA) 100 ppm; USA NIOSH REL (TWA) (ppm) 100 ppm; USA NIOSH REL (STEL) (ppm) 125 ppm.

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Green colored thin viscosity liquid with sweet solvent odor.
Physical State:	Liquid
Odor:	Sweet solvent odor
Odor Threshold:	No data available
Molecular Formula:	Mixture
Particle Size:	Not applicable
Solubility:	Partially soluble in water
Spec Grav./Density:	0.93
Softening Point:	No data available
Viscosity:	Thin liquid.
Percent Volatile:	83.4% Volatile
Saturated Vapor Concentration	No data available
Heat Value:	No data available
Boiling Point:	171-483 F
Freezing/Melting Pt.:	No data available
Flammability:	No data available
Flash Point:	24 F
Partition Coefficient:	No data available
Octanol:	No data available
Vapor Pressure:	No data available
Vapor Density:	Heavier than air.
pH:	Not applicable
VOC:	6.45 lbs/gal
Evap. Rate:	Faster than N-butyl Acetate = 1
Bulk Density:	No data available
Molecular weight:	No data available
Auto-Ignition Temp:	No data available
Decomp Temp:	No data available
UFL/LFL:	1.2/36

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STABILITY AND REACTIVITY

Stability:	Reactivity: No additional information available 10.2. Chemical stability Stable under normal conditions. 10.3. Possibility of hazardous reactions No additional information available 10.4. Conditions to avoid Heat. Sparks. Open flame. DO NOT distill or evaporate to near dryness. potential peroxide formation. 10.5. Incompatible materials Oxidizing agent. strong acids. Strong bases. 10.6. Hazardous decomposition products Carbon dioxide. Carbon monoxide
Conditions to Avoid:	Avoid strong oxidizing and reducing agents, strong alkalies and strong acids.

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TOXICOLOGICAL INFORMATION

Ethanol (64-17-5)

LD50 oral rat 10740 mg/kg body weight (Rat; Experimental value, Rat; Experimental value); LD50 dermal rabbit > 16000 mg/kg (Rabbit)

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2-(2-Butoxyethoxy)ethanol (112-34-5)

LD50 oral (Rat) 4500 mg/kg; LD50 dermal (Rabbit)= 2764 mg/kg body weight; LC50 inhalation: no data available; Repeated dose toxicity: NOAEL (Rat, in drinking water, 90 d): 250 mg/kg, NOAEL (Rat, Dermal study, 90 d): > 2,000 mg/kg (highest dose tested), NOAEL (Rat, Inhalation study:, 90 d): > 0.094 mg/l; Skin corrosion/Irritation: causes slight skin irritation (Rabbit, 4H); Serious eye damage/eye irritation: (Rabbit, 24 h) moderate; Respiratory or skin sensitization: (Guinea Pig)-non-sensitizing; Germ cell mutagenicity: Not classified; Carcinogenicity: No data available; Reproductive toxicity: No data available; Specific target organ toxicity-single exposure: No data available; Specific target organ toxicity-repeated exposure: No data available; Aspiration hazard: No data available; Other adverse effects: No data available.

2-Propoxyethanol (2807-30-9)

LD50 oral rat 3089 mg/kg (Rat); LD50 dermal rabbit 873 mg/kg (Rabbit); Skin corrosion/irritation : Not classified; Serious eye damage/irritation : Causes eye irritation.; Respiratory or skin sensitization : Not classified

Toluene (108-88-3)

LD50 oral rat 636 mg/kg; LD50 dermal rabbit 12223 mg/kg (>5000 mg/kg bodyweight; Rabbit; Rabbit; Experimental value; Other, >5000 mg/kg bodyweight; Rabbit; Rabbit; Experimental value; Other); LC50 inhalation rat (mg/l) > 20 mg/l/4h (Rat); Additional information Target organs: liver, kidneys, CNS, blood, heart, adrenals, spleen, auditory

Titanium Dioxide (13463-67-7)

LD50 oral rat 5000 mg/kg (Rat); LD50 dermal rat >= No skin irritation; LC50 inhalation rat (mg/l) > 6.82 mg/l 4Hr; Repeated dose toxicity: No data available. Skin corrosion/Irritation: None known. Serious eye damage/eye irritation: Causes serious eye irritation. Respiratory or skin sensitization: Not classified; Mutagenicity: No data available. Carcinogenicity: As airborne, unbound particles of respirable size is suspected of causing cancer. IARC has classified TiO2 as 2B Possibly carcinogenic to humans. However, the only evidence of carcinogenicity is in rats exposed to very high concentrations. Two major epidemiology studies among titanium dioxide workers in the US and in Europe could not demonstrate an elevated lung cancer risk. Reproductive toxicity: None known. Specific target organ toxicity-single exposure: None known. Specific target organ toxicity-repeated exposure: None known. Aspiration hazard: No data available. Other adverse effects: No data available.

Xylene (1330-20-7)

LD50 oral (Rat) >3608 mg/kg; LD50 dermal (Rat) >= 2000 mg/kg body weight; LD50 dermal (rabbit) > 10 ml/kg; LC50 inhalation (Rat 4 h) 2000-4000 ppm; Repeated dose toxicity: No data available; Skin corrosion/Irritation: not classified; Serious eye damage/eye irritation: causes serious eye irritation; Respiratory or skin sensitization: Not classified; Mutagenicity: No data available; Carcinogenicity: Not classified; Reproductive toxicity: No data available; Specific target organ toxicity-single exposure: may cause drowsiness or dizziness; Specific target organ toxicity-repeated exposure: No data available; Aspiration hazard: Not classified; Other adverse effects: Target organs: liver, kidneys, blood, heart, bone marrow, CNS, auditory.

Methyl Isobutyl Ketone (108-10-1)

LD50 oral (Rat) 2080 mg/kg; LD50 dermal (Rat) >= 2000 mg/kg body weight; LD50 dermal (rabbit) > 10 ml/kg; LC50 inhalation (Rat 4 h) 2000-4000 ppm; Repeated dose toxicity: No data available. Skin corrosion/Irritation: (Rabbit, 72 h): none; Serious eye damage/eye irritation (Rabbit): slight to moderate; Respiratory or skin sensitization: No data available; Mutagenicity: No data available; Carcinogenicity: IARC 2B: Possibly carcinogenic to humans; Reproductive toxicity: No data available; Specific target organ toxicity-single exposure: No data available; Specific target organ toxicity-repeated exposure: No data available; Aspiration hazard: May be harmful if swallowed and enters airways; Other adverse effects: MIBK is classified as an IARC 2B material. IARC 2B is a classification for possible human carcinogen based on sufficient evidence on carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

N-Butyl Acetate (123-86-4)

LD50 oral rat 14130 mg/kg (Rat); LD50 dermal rabbit > 16ml/kg; LC50 inhalation rat (mg/l) >21.1mg/l/4h; Repeated dose toxicity: No data available; Skin corrosion/Irritation: (Rabbit, 72 h): No data available; Serious eye damage/eye irritation (Rabbit, 24 h) none; Respiratory or skin sensitization: Guinea Pig-non-sensitizing; Mutagenicity: No data available. Carcinogenicity: No data available; Reproductive toxicity: No data available; Specific target organ toxicity-single exposure: No data available; Specific target organ toxicity-repeated exposure: No data available; Aspiration hazard: No data available; Other adverse effects: No data available.

Isopropyl Alcohol (67-63-0)

LD50 oral rat 5045 mg/kg (5840 mg/kg bodyweight; Rat; Rat; Experimental value, 5840 mg/kg bodyweight; Rat; Rat; Experimental value); LD50 dermal rabbit 12870 mg/kg (16.4; Rabbit; Rabbit; Experimental value, 16.4; Rabbit; Rabbit; Experimental value); LC50 inhalation rat (mg/l) 73 mg/l/4h (Rat)

Methanol (67-56-1)

LD50 oral rat >5000 mg/kg (1187-2769 mg/kg bodyweight; (Rat); LD50 dermal rabbit =15800 mg/kg; LC50 inhalation rat (mg/l) 85 mg/l/4h (Rat); LC50 inhalation rat (ppm) 64000 ppm/4h (Rat). Methanol is a poisonous, narcotic chemical. Ingestion of methanol can cause blindness and death. The lethal dose is 5.6-13.0 g/kg body weight (Oral, rat); Skin corrosion/Irritation: Not classified; Serious eye damage/eye irritation: Not classified; Respiratory or skin sensitization: Not classified; Mutagenicity: Not classified; Carcinogenicity: Not Classified; Reproductive toxicity: Not classified; Specific target organ toxicity-single exposure: Causes damage to organs.; Specific target organ toxicity-repeated exposure: Causes damages to organs: Organs potentially affected: liver, kidneys, central nervous system; Aspiration hazard: not classified; May be harmful if swallowed and enters airways; Other adverse effects: methanol can be absorbed through the skin, producing systemic effects that include visual disturbances.

Ethyl Benzene (100-41-4)

LD50 oral (Rat) 3500 mg/kg; LD50 dermal (Rabbit) >= 15415 mg/kg body weight; LC50 inhalation (Rat 4 h) 17.8 mg/l/4h (Rat) LC50 inhalation rat (ppm) 4000 ppm/H (Rat); Repeated dose toxicity: No data available. Skin corrosion/Irritation: (Rabbit, 72 h): No data available; Serious eye damage/eye irritation (Rabbit): No data available; Respiratory or skin sensitization: No data available; Mutagenicity: No data available; Carcinogenicity: IARC 2B: Possibly carcinogenic to

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humans; Reproductive toxicity: No data available; Specific target organ toxicity-single exposure: No data available; Specific target organ toxicity-repeated exposure: No data available; Aspiration hazard: May be harmful if swallowed and enters airways; Other adverse effects: Ethyl Benzene is classified as an IARC 2B material. IARC 2B is a classification for possible human carcinogen based on sufficient evidence on carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

Repeated dose toxicity: No data available
Skin corrosion/Irritation: Causes skin irritation
Serious eye damage/eye irritation: Causes serious eye irritation
Respiratory or skin sensitization: Not classified
Mutagenicity: No data available
Carcinogenicity: No data available
Reproductive toxicity: No data available
Specific target organ toxicity-single exposure: No data available
Specific target organ toxicity-repeated exposure: No data available
Aspiration hazard: No data available
Other adverse effects: No data available

12**ECOLOGICAL INFORMATION****Ethanol (64-17-5)**

LC50 fish 1 14200 mg/l (96 h; Pimephales promelas; NOMINAL CONCENTRATION); EC50 Daphnia 1 9300 mg/l (48 h; Daphnia magna); LC50 fish 2 13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss); EC50 Daphnia 2 10800 mg/l (24 h; Daphnia magna); Threshold limit other aquatic organisms 1 65 mg/l (72 h; Protozoa); Threshold limit algae 1 1450 mg/l (192 h; Microcystis aeruginosa; GROWTH RATE); Threshold limit algae 2 5000 mg/l (168 h; Scenedesmus quadricauda; GROWTH RATE)

2-(2-butoxyethoxy)ethanol (112-34-5)

Acute toxicity Fish: LC50 (96h) 1300 mg/l; Aquatic invertebrates: EC-50 (daphnid, 48 h): > 100 mg/l; Chronic Toxicity to the aquatic environment: No data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants: EC-50 (Alga (96 h): > 100 mg/l; Persistence and degradability: 85% (28 d) Readily biodegradable; Biological Oxygen Demand (BOD-5): 250 mg/g; Chemical Oxygen Demand (COD): 2080 mg/g; BOD/COD ratio: No data available; Bioaccumulative potential: No data available; Mobility in soil: No data available; Other adverse effects: No data available.

Ethylene Glycol Monopropyl Ether (2807-30-9)

Acute toxicity Fish: LC50 (Fathead Minnow, 96h): > 5,000 mg/l; Aquatic invertebrates: LC-50 (Water Flea, 48 h): > 5,000 mg/l; Chronic Toxicity to the aquatic environment: Fish: No data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants: EC-50 (Algae (Pseudokirchneriella subcapitata, 72 h): > 100 mg/l; Persistence and degradability: Readily biodegradable; Chemical Oxygen Demand: 2.04g O₂/g substance; Biological Oxygen Demand (BOD): BOD-5: 1,200 mg/l; BOD-20: 1,500 mg/l; BOD/COD ratio: No data available; Bioaccumulative potential: No data available; Mobility in soil: No data available; Results of PBT and vPvB assessment: Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.; Other adverse effects: No data available

Toluene (108-88-3)

LC50 fish 1 24 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss); EC50 Daphnia 1 84 mg/l (24 h; Daphnia magna; LOCOMOTOR EFFECT); LC50 fish 2 13 mg/l (96 h; Lepomis macrochirus); EC50 Daphnia 2 11.5 - 19.6 mg/l (48 h; Daphnia magna); Threshold limit algae 1 > 400 mg/l (168 h; Scenedesmus quadricauda; TOXICITY TEST); Threshold limit algae 2 105 mg/l (192 h; Microcystis aeruginosa)

Ethyl Acetate (141-78-6)

LC50 fishes 1 54.7 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss); EC50 Daphnia 1 2500 mg/l (24 h; Daphnia magna); LC50 fish 2 230 mg/l (96 h; Pimephales promelas); EC50 Daphnia 2 154 mg/l (48 h; Daphnia magna); TLM fish 1 100 - 1000, 96 h; Pisces; TLM other aquatic organisms 1 100 - 1000, 96 h; Threshold limit algae 1 2000 mg/l (96 h; Selenastrum capricornutum; Biomass); Threshold limit algae 2 15 mg/l (192 h; Scenedesmus quadricauda; Growth rate)

Titanium Dioxide (13463-67-7)

Ecotoxicity: Not expected to be hazardous to the environment. Environmental effects: Not expected to be an environmental hazard. Persistence and degradability: No data. Bioaccumulative potential: Unlikely significant due to water insolubility. Mobility in soil: Insoluble in water and will sediment in water systems. Other adverse effects: No additional information available.

Xylene (1330-20-7)

Acute toxicity Fish: LC50 (Salmo gairdneri): 2.6-8.4 mg/l; EC50 (Daphnia 1 48 h): 1.4-7.4 mg/l; Aquatic invertebrates: no data available; Chronic Toxicity: no data available; Fish: no data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants: No data available; Persistence and degradability: readily biodegradable in water; Biological Oxygen Demand: BOD 1.4-2.53 g/O₂/g; Chemical Oxygen Demand: 2.56-2.91 O₂/g substance; BOD (% of ThOD) 44-81.6 % ThOD; BOD/COD ratio: No data available; Bioaccumulative potential: No data available; Mobility in soil: No data available; Other adverse effects: No data available.

Methyl Isobutyl Ketone (108-10-1)

Acute toxicity Fish: LC50 (goldfish, 24h): 460 mg/l; LC50 (golden orfe, 48 h): 675-750 mg/l; Aquatic invertebrates: LC-50 (Water flea, 24 h): 4,300 mg/l; LC-

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50 (Brown Shrimp, 24 h):1250 mg/l; Chronic Toxicity:no data available; Fish: no data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants: No data available; Persistence and degradability: No data available; Biological Oxygen Demand: BOD-5: 1,940-2060 mg/g; Chemical Oxygen Demand: 2160-2460 mg/g; BOD/COD ratio: No data available; Bioaccumulative potential: No data available; Mobility in soil: No data available; Other adverse effects: No data available.

N-Butyl Acetate (123-86-4) Acute toxicity Fish: LC50 (Fathead Minnow, 96h):18 mg/l ; Aquatic invertebrates LC50 (Water Flea, 48 h):44 mg/l; Chronic Toxicity:no data available; Fish: no data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants:EC-50 (Algae, 72 h) 648 mg/l; Persistence and degradability: No data available; Biological Oxygen Demand: BOD-5: 1,020 mg/g, BOD -20: 1450 mg/g; Chemical Oxygen Demand: 1010 mg/g; BOD/COD ratio:72%; Bioaccumulative potential: No data available; Mobility in soil: No data available; Other adverse effects: No data available.

Isopropyl Alcohol (67-63-0)

LC50 fish 1 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system); EC50 Daphnia 1 > 10000 mg/l (48 h; Daphnia magna);LC50 fish 2 9640 mg/l (96 h; Pimephales promelas; LETHAL);EC50 Daphnia 2 13299 mg/l (48 h; Daphnia magna);Threshold limit algae 1 > 1000 mg/l (72 h; Scenedesmus subspicatus; GROWTH RATE); Threshold limit algae 2 1800 mg/l (72 h; Algae; Cell numbers)

Methanol (67-56-1) Acute toxicity Fish: LC50 15400 mg/l (Lepomis macrochinus; Lethal,96h); EC50 Daphnia 1: >10000 mg/l (48 h; Daphnia magna; Lethal);LC 50 Fish 2:10800 mg/l 96 h. Salmo gairdneri (Oncorhynchus mykiss); EC50 Daphnia 2: 24500 mg/l (48 h; Daphnia magna); Threshold limit other aquatic organisms 1: 6800 mg/l (16 h Pseudomonas putida);Threshold limit algae 1: 530 mg/l (192 h; Microcystis aeruginosa); Threshold limit algae 2: 8000 mg/l (168 h; Scenedesmus quadricauda);Aquatic invertebrates: No data available; Chronic Toxicity:no data available; Fish: no data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants: No data available; Persistence and degradability: Readily biodegradable in water. Biodegradable in the soil. Biological Oxygen Demand:0.4-0.73% ThOD; Chemical Oxygen Demand:1.42 g O2/g substance; Bioaccumulative potential:Low potential for bioaccumulation (BCF <500); Mobility in soil: Surface tension 0.023 N/m (20C).

Ethyl Benzene (100-41-4)

Acute toxicity Fish: LC50 (Pimephales promelas, 96h):9.09 mg/l/460 mg/l ; EC50 (Daphnia 1, 24 h): 77 mg/l; EC50 Aquatic organisms: 48mg/l (72 h, Scenedesmus subspicatus); Chronic Toxicity:no data available; Fish: no data available; Aquatic invertebrates: No data available; Toxicity to aquatic plants: No data available; Persistence and degradability:Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil; Biochemical Oxygen Demand:1.44g/O2/g substance (20D); Chemical Oxygen Demand: 2.1g O2/g substance; ThOd 3.17 g/O2/g substance;BOD (% of ThOD) 44-81.6 % ThOd; BOD/COD ratio: No data available; Bioaccumulative potential:BCF fish 1 (6 weeks, Oncorhynchus kisutch); Mobility in soil: Surface tension 0.029 N/m; Other adverse effects: No data available.

13**DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

Waste disposal recommendations : In its manufactured form this material is hazardous for ignitability (D001) under federal RCRA disposal criteria. Spent material may contain other hazardous components or lend other hazardous properties to this material. Generators are advised to perform analysis on all waste streams for proper characterization and disposal.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

14**TRANSPORT INFORMATION**

DOT Class: Flammable Liquid (3) #3

UN #: UN 1210, Class: 3, Proper Shipping Name: Printing ink, flammable

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Domestic Highway:

Proper Shipping Name: Printing Ink

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Hazard Class/Subsidiary Hazard: 3 Flammable liquid**UN/NA No:** 1210**Packing Group:** II**Label Required:** Flammable Liquid**Domestic Air Shipments:****Proper Shipping Name:** Printing Ink**Hazard Class/Subsidiary Hazard:** 3 Flammable liquid**UN/NA No:** 1210**Packing Group:** II**Label Required:** Flammable Liquid**15****REGULATORY INFORMATION****COMPONENT / (CAS/PERC) / CODES**

*Ethanol (64175 20-30%) MASS, OSHAWAC, PA, TSCA, TXAIR

*Diethylene glycol monobutyl ether (112345 20-30%) HAP, TSCA

*Ethanol, 2-propoxy- (2807309 10-20%) HAP, TSCA

*Toluene (108883 5-10%) CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, PRIPOL, PROP65, SARA313, TOXICPOL, TOXICRCRA, TSCA, TXAIR, TXHWL

Ethyl acetate (141786 1-05%) CERCLA, MASS, OSHAWAC, PA, TOXICRCRA, TSCA, TXAIR, TXHWL

*Titanium dioxide (13463677 1-05%) MASS, OSHAWAC, PA, TSCA, TXAIR

*Xylene (mixed isomers) (1330207 1-05%) CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

*Methyl isobutyl ketone (108101 1-05%) CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

*n-Butyl acetate (123864 1-05%) CERCLA, CSWHS, MASS, OSHAWAC, PA, TSCA, TXAIR

*Isopropyl alcohol (67630 1-05%) MASS, NJHS, NRC, OSHAWAC, PA, SARA313, TSCA, TXAIR

*Methanol (67561 01-05%) CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

*Ethyl benzene (100414 0.1-1%) CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

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Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by these regulations.

-DSL/NDSL; All materials in this product are listed on the DSL.

WHMIS Classifications: B2, D2A, D2B

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List
OSHA WAC = OSHA workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
EPCRAWPC = EPCRA Water Priority Chemicals
HAP = Hazardous Air Pollutants
NJHS = NJ Right-to-Know Hazardous Substances
PRIPOL = Clean Water Act Priority Pollutants
PROP65 = CA Prop 65
SARA313 = SARA 313 Title III Toxic Chemicals
TOXICPOL = Clean Water Act Toxic Pollutants
TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)
TXHWL = TX Hazardous Waste List
ACUTERCRA = RCRA Acute Hazardous Wastes (P-List)
EHS302 = Extremely Hazardous Substance
NJEHS = NJ Extraordinarily Hazardous Substances
OSHAPSM = OSHA Chemicals Requiring process safety management
NRC = Nationally Recognized Carcinogens
APP9 = Appendix 9
HWRCRA = RCRA Hazardous Wastes
OSHAHTS = OSHA Hazardous and Toxic Substances

16**OTHER INFORMATION**

WARNING! The use of this product is beyond the control of the manufacturer and distributor; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The manufacturer and distributor warrant only that this product meets the specifications for such product. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER OF THIS PRODUCT. THE MANUFACTURER AND DISTRIBUTOR SHALL BE IN NO WAY RESPONSIBLE FOR THE PROPER USE OF THIS PRODUCT.** The sole and exclusive remedy against the manufacturer and distributor for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. **NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.**