

Safety Data Sheet

Issue Date: 24-Feb-2009

Revision Date: 11-Aug-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Type D N.L. Green Ink

Other means of identification

SDS # USM-003

Product Code IU-D3NL4, IU-D3NLQT, IU-D3NLQTH, IU-D3NLGL
UN/ID No UN1210

Recommended use of the chemical and restrictions on use

Recommended Use Printing ink.

Details of the supplier of the safety data sheet

Manufacturer/Supplier

Universal Stenciling & Marking Systems, Inc.
205 15th Avenue S.E.
St. Petersburg, FL 33701
PH: 727-894-3027

Emergency Telephone Number

Emergency Telephone (24 hr) Chemtrec 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Green liquid

Physical State Liquid

Odor Alcohol

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A
Flammable Liquids	Category 3

Hazards Not Otherwise Classified (HNOC)

May be harmful in contact with skin

Signal Word

Danger

Hazard Statements

Harmful if swallowed
Harmful if inhaled
Causes skin irritation
Causes serious eye damage
May cause cancer
Flammable liquid and vapor

**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
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
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
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
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 cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Please also refer to subsequent sections of this SDS for additional information regarding the components of this product.

Chemical Name	CAS No	Weight-%
Ethylene Glycol Monobutyl Ether	111-76-2	30-40
n-Propyl Alcohol	71-23-8	10-20
Titanium dioxide	13463-67-7	10-20
Ethyl Alcohol	64-17-5	1-10
Pigment Yellow	5468-75-7	1-5
Pigment Blue	147-14-8	1-5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Get immediate medical advice/attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If irritation persists or feeling unwell, obtain medical advice.
Inhalation	Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician / poison center if individual's condition declines or if symptoms persist.
Ingestion	Do not induce vomiting without medical advice. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most important symptoms and effects

Symptoms	Causes skin irritation and serious eye damage. May cause irritation to the mucous membranes and upper respiratory tract.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water fog or fine spray, carbon dioxide, dry chemical or foam.

Unsuitable Extinguishing Media Direct water stream may spread fire.

Specific Hazards Arising from the Chemical

Flammable liquid and vapor. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products Carbon oxides.

Sensitivity to Static Discharge May be ignited by heat, sparks or flames. Take precautionary measures against static discharge.

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** Wear protective clothing as described in Section 8 of this safety data sheet. Remove all sources of ignition & ventilate area. Evacuate unnecessary personnel.
- Environmental Precautions** See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so. Soak up and contain spill with an inert (i.e. vermiculite, dry sand or earth) absorbent material.
- Methods for Clean-Up** Use clean non-sparking tools to collect absorbed material. Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE**Precautions for safe handling**

- Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when handling this product. Use personal protection recommended in Section 8. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only with adequate ventilation. Ground/bond container and receiving equipment. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Use spark-proof tools and explosion-proof equipment. Keep container tightly closed. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.
- Incompatible Materials** Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethylene Glycol Monobutyl Ether 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* 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
Hydrous Aluminum Silicate 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
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 TWA: 1000 ppm TWA: 1900 mg/m ³
Pigment Blue 147-14-8	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Maintain eye wash fountain and quick-drench facilities in work area. Local exhaust ventilation recommended.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Use safety glasses or chemical splash goggles. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection Gloves are recommended. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection MSHA/ NIOSH-approved vapor respirator is recommended with handling in areas where adequate ventilation is not available. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Alcohol
Appearance	Green liquid	Odor Threshold	Not determined
Color	Green		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	22.77 °C / 73 °F	ASTM D3828-05
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Heavier than air	(Air=1)
Specific Gravity	Not determined	
Water Solubility	Not determined	

Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidizing Properties	Not determined
VOC Content (%)	55.9
Density	9.69 lbs/gal

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Heat, sparks and open flames.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes serious eye damage.
Skin Contact	Causes skin irritation. May be harmful in contact with skin.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol Monobutyl Ether 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
n-Propyl Alcohol 71-23-8	= 1870 mg/kg (Rat)	= 4049 mg/kg (Rabbit)	> 13548 ppm (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-
Ethyl Alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Pigment Yellow 5468-75-7	> 5 g/kg (Rat)	-	-

Information on physical, chemical and toxicological effects**Symptoms**

Please see section 4 of this SDS for symptoms.

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

May cause cancer. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as an alcoholic beverage. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylene Glycol Monobutyl Ether 111-76-2	A3	Group 3		
Titanium dioxide 13463-67-7		Group 2B		X
Ethyl Alcohol 64-17-5	A3	Group 1	Known	X
Pigment Yellow 5468-75-7		Group 1	Known	X

Legend**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 IARC components are "not classifiable as human carcinogens"

NTP (National Toxicology Program)

Known - Known Carcinogen

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

X - Present

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene Glycol Monobutyl Ether 111-76-2		1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50		1000: 48 h Daphnia magna mg/L EC50 1698 - 1940: 24 h Daphnia magna mg/L EC50
n-Propyl Alcohol 71-23-8		4480: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 17700 mg/L 5 min EC50 = 45000 mg/L 5 h EC50 = 8686 mg/L 15 min EC50 = 980 mg/L 12 h	3642: 48 h Daphnia magna mg/L EC50 3339 - 3977: 48 h Daphnia magna mg/L EC50 Static
Ethyl Alcohol 64-17-5		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50
Pigment Blue 147-14-8		100: 48 h Oryzias latipes mg/L LC50 static		

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Ethylene Glycol Monobutyl Ether 111-76-2	0.81
n-Propyl Alcohol 71-23-8	0.25 - 0.34
Ethyl Alcohol 64-17-5	-0.32
Pigment Blue 147-14-8	6.6

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.
- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

D001

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
n-Propyl Alcohol 71-23-8	Toxic Ignitable
Ethyl Alcohol 64-17-5	Toxic Ignitable
Pigment Blue 147-14-8	Toxic

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1210
 Proper Shipping Name Printing ink
 Hazard Class 3
 Packing Group III

IATA

UN/ID No UN1210
 Proper Shipping Name Printing ink
 Hazard Class 3
 Packing Group III

IMDG

UN/ID No UN1210
 Proper Shipping Name Printing ink

Hazard Class 3
Packing Group III

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Ethylene Glycol Monobutyl Ether	Present	X		Present		Present	X	Present	X	X
n-Propyl Alcohol	Present	X		Present		Present	X	Present	X	X
Titanium dioxide	Present	X		Present		Present	X	Present	X	X
Ethyl Alcohol	Present	X		Present		Present	X	Present	X	X
Pigment Yellow	Present	X		Present		Present	X	Present	X	X
Pigment Blue	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

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).

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

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 %
Ethylene Glycol Monobutyl Ether - 111-76-2	111-76-2	30-40	1.0
Pigment Blue - 147-14-8	147-14-8	1-5	1.0

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
Pigment Blue		X		

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
Ethyl Alcohol - 64-17-5	Carcinogen Developmental
Pigment Yellow - 5468-75-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylene Glycol Monobutyl Ether 111-76-2	X	X	X
n-Propyl Alcohol 71-23-8	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Hydrous Aluminum Silicate 1332-58-7	X	X	X
Ethyl Alcohol 64-17-5	X	X	X
Pigment Blue 147-14-8	X		X

16. OTHER INFORMATION

NFPA**Health Hazards****Flammability****Instability****Special Hazards****HMIS****Health Hazards****Flammability****Physical Hazards****Personal Protection**Not determined
2Not determined
3Not determined
0Not determined
Not determined

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Revision Note: New format

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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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