



Material Safety Data Sheet
Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

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1. PRODUCT AND COMPANY IDENTIFICATION

Product code 55LF14
Product name Emerald Green
Product category 5500 Series Flat Poster Screen Ink

Manufacturer or supplier's details

UNITED STATES
 Nazdar Company
 8501 Hedge Lane Terrace
 Shawnee, KS 66227
 Tel: 1-913-422-1888
 Tel: 1-800-677-4657
 Fax: 1-913-422-2294

UNITED KINGDOM
 Nazdar Limited
 Barton Road
 Heaton Mersey
 Stockport, England SK4 3EG
 Tel: +44 161 442 2111

Emergency Telephone Number

USA: Chemtrec: 1-800-424-9300
 Outside USA: Chemtrec: 1-703-527-3887

Website: www.nazdar.com
 MSDS Information: 1-913-422-1888 ext 2305
 MSDS Contact: Regulatory Compliance
 email: regcomp@nazdar.com

2. HAZARDS IDENTIFICATION

This product is a preparation. Health hazard information is based on its components.

Appearance Colored liquid
Flammable Properties FLAMMABLE LIQUID AND VAPOR.
Emergency Overview Aspiration hazard. Harmful: may cause lung damage if swallowed. Irritant. May cause drowsiness and dizziness.

Eyes Moderately irritating to the eyes.
Skin Causes skin irritation.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Harmful if swallowed. Potential for aspiration if swallowed. Risk of serious damage to the lungs (by aspiration).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Stoddard solvent	8052-41-3	10 - 30
Petroleum naphtha, light aromatic	64742-95-6	10 - 30
1,2,4-Trimethylbenzene (contaminant)	95-63-6	5 - 10
Crystalline silica (cristobalite)	14464-46-1	5 - 10
Talc	14807-96-6	5 - 10
Ethylene glycol monopropyl ether	2807-30-9	5 - 10
Titanium dioxide	13463-67-7	5 - 10
Inert Pigment	Trade Secret	5 - 10
1,3,5-Trimethylbenzene (contaminant)	108-67-8	1 - 5
Cumene (contaminant)	98-82-8	1 - 5
Copper Phthalocyanine Compound	Trade Secret	1 - 5
Quartz, crystalline silica	14808-60-7	< 0.5

• Component names which have the word (contaminant) are constituents contained in Aromatic Hydrocarbon ingredients and are an integral part of the ingredient and cannot be separated. The percentage listed for the contaminant is as contained in the Hydrocarbon ingredient. (Example: 100% Hydrocarbon, 10% Contaminant A, 3% Contaminant B)

4. FIRST AID MEASURES

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Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.
Skin Contact	Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.
Inhalation	If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.
Ingestion	If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties	FLAMMABLE LIQUID AND VAPOR.
Suitable Extinguishing Media	Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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. Keep away from fire, sparks and heated surfaces. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes. Keep product and empty container away from heat and sources of ignition. Risk of ignition.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Methods for Cleaning Up	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.
Environmental Precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Do not take internally. Harmful or fatal if swallowed. Take notice of the directions of use on the label.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

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Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Stoddard solvent	TWA: 100 ppm	TWA: 100 ppm TWA: 525 mg/m ³ TWA: 500 ppm TWA: 2900 mg/m ³	20000 mg/m ³	TWA: 525 mg/m ³	TWA/LMPE-PPT: 100 ppm TWA/LMPE-PPT: 523 mg/m ³ STEL/LMPE-CT: 200 ppm STEL/LMPE-CT: 1050 mg/m ³
Crystalline silica (cristobalite)	TWA: 0.025 mg/m ³ (respirable fraction)	TWA: 0.05 mg/m ³ (respirable dust)	25 mg/m ³	TWA: 0.05 mg/m ³ (respirable)	TWA/LMPE-PPT: 0.05 mg/m ³ (respirable fraction)
Talc	TWA: 2 mg/m ³ (particulate matter)	TWA: 2 mg/m ³ (respirable dust)	1000 mg/m ³	TWA: 2 mg/m ³ (respirable)	TWA/LMPE-PPT: 2 mg/m ³ (respirable fraction)
Ethylene glycol monopropyl ether				TWA: 25 ppm TWA: 110 mg/m ³ Skin	
Titanium dioxide	TWA: 10 mg/m ³	TWA: 10 mg/m ³ (total dust) TWA: 15 mg/m ³ (total dust)	5000 mg/m ³	TWA: 10 mg/m ³ (total dust)	TWA/LMPE-PPT: 10 mg/m ³ (as Ti) STEL/LMPE-CT: 20 mg/m ³ (as Ti)
Cumene (contaminant)	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m ³ Skin	900 ppm (10% LEL)	TWA: 50 ppm	TWA/LMPE-PPT: 50 ppm TWA/LMPE-PPT: 245 mg/m ³ STEL/LMPE-CT: 75 ppm STEL/LMPE-CT: 365 mg/m ³
Quartz, crystalline silica	TWA: 0.025 mg/m ³ (respirable fraction)	TWA: 0.1 mg/m ³ (respirable dust)	50 mg/m ³	TWA: 0.10 mg/m ³ (respirable)	TWA/LMPE-PPT: 0.1 mg/m ³ (respirable fraction)

Engineering Measures

Use ventilation adequate to keep exposures below recommended exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment**Respiratory Protection**

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection

Ensure that eyewash stations and safety showers are close to the workstation location.

Skin Protection

Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield. Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored liquid	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	No information available	Autoignition Temperature	No information available
Boiling point/Boiling Range	>149 °C / >300 °F	Melting Point/Range	No information available
Freezing Point/Range	No information available	Solubility	No information available
Evaporation Rate	No information available	Partition Coefficient (n-octanol/water)	No information available
Vapour Pressure	No information available	Vapour Density	Heavier than air
Flammability (solid, gas)	No information available	Flammability Limits in Air	
		Upper	No information available
		Lower	No information available
Flash Point	29 °C / 85 °F	Photochemically Reactive	Yes
Method	Pensky Martens Closed Cup (PMCC)		
Weight Per Gallon (lbs/gal)	9.25	Specific Gravity	1.11

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VOC by weight % (less water) 52.76
 VOC lbs/gal (less water) 4.89

VOC by volume % (less water) 68.37
 VOC grams/liter (less water) 585.34

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO₂). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum naphtha, light aromatic	8400 mg/kg (Rat)	>2000 mg/kg (Rabbit)	3400 ppm (Rat) 4 h >5.2 mg/L (Rat) 4 h
1,2,4-Trimethylbenzene (contaminant)	3400 mg/kg (Rat)	>3160 mg/kg (Rabbit)	18 g/m ³ (Rat) 4 h
Ethylene glycol monopropyl ether	3089 mg/kg (Rat)	960 µL/kg (Rabbit)	
Titanium dioxide	>10000 mg/kg (Rat)		
1,3,5-Trimethylbenzene (contaminant)	5000 mg/kg (Rat)		24 g/m ³ (Rat) 4 h
Cumene (contaminant)	1400 mg/kg (Rat)	>3160 mg/kg (Rabbit)	39000 mg/m ³ (Rat) 4 h
Copper Phthalocyanine Compound	3000 mg/kg (Rat)		
Quartz, crystalline silica	500 mg/kg (Rat)		

Chronic Toxicity

Component	ACGIH	IARC	NTP	OSHA
Crystalline silica (cristobalite)		Group 1		X
Titanium dioxide		Group 2B		X
Cumene (contaminant)		Group 2B		X
Quartz, crystalline silica		Group 1	Known	X

Legend:

IARC: (International Agency for Research on Cancer)

NTP: (National Toxicity Program)

OSHA: (Occupational Safety & Health Administration)

Group 1 - Carcinogenic to Humans
 Group 2B - Possibly Carcinogenic to Humans
 Known - Known Carcinogen
 X - Present

Sensitisation No information available

Mutagenic Effects No information available

Reproductive Effects No information available

Developmental hazard No information available

Teratogenicity No information available

Chronic Effects Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system.

Target Organ Effects Blood, Central nervous system, Central Vascular System, Eyes, Kidney, Liver, Respiratory system, Skin.

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12. ECOLOGICAL INFORMATION

Ecotoxicity

We have no quantitative data concerning the ecological effects of this product. Should not be released into the environment.

Component	Algae	Fish	Water Flea
Petroleum naphtha, light aromatic		96h LC50 Oncorhynchus mykiss: 9.22 mg/L	
1,2,4-Trimethylbenzene (contaminant)		96h LC50 Pimephales promelas: 7.19 - 8.28 mg/L [flow-through]	48h EC50 Daphnia magna: 6.14 mg/L
Talc		96h LC50 Brachydanio rerio: >100 g/L [semi-static]	
1,3,5-Trimethylbenzene (contaminant)		96h LC50 Pimephales promelas: 3.48 mg/L	24h EC50 Daphnia magna: 50 mg/L
Cumene (contaminant)	72h EC50 Pseudokirchneriella subcapitata: 2.6 mg/L	96h LC50 Pimephales promelas: 6.04 - 6.61 mg/L [flow-through] 96h LC50 Oncorhynchus mykiss: 2.7 mg/L [semi-static] 96h LC50 Oncorhynchus mykiss: 4.8 mg/L [flow-through] 96h LC50 Poecilia reticulata: 5.1 mg/L [semi-static]	48h EC50 Daphnia magna: 7.9 - 14.1 mg/L [static] 48h EC50 Daphnia magna: 0.6 mg/L
Copper Phthalocyanine Compound		96h LC50 Lepomis macrochirus: 752.4 mg/L [static]	24h EC50 Daphnia magna Straus: >500 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
1,2,4-Trimethylbenzene (contaminant)	3.63
Cumene (contaminant)	3.55

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

UN1210, Printing Ink, 3, III

ICAO/IATA

UN1210, Printing Ink, 3, III

IMDG/IMO

UN1210, Printing Ink, 3, III

15. REGULATORY INFORMATION

International Inventories

Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

U.S. Federal Regulations

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313

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Component	CAS-No	Weight %	SARA 313 - Threshold Values
Ethylene glycol monopropyl ether	2807-30-9	5 - 10	1.0
1,2,4-Trimethylbenzene (contaminant)	95-63-6	5 - 10	1.0
Cumene (contaminant)	98-82-8	1 - 5	1.0

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

Component	CAS-No	Weight %
Ethylene glycol monopropyl ether	2807-30-9	5 - 10
Cumene (contaminant)	98-82-8	1 - 5

U.S. State Regulations

Component	Massachusetts Right To Know	Minnesota Right To Know	New Jersey Right To Know	Pennsylvania Right To Know
Stoddard solvent	X	X	X	X
1,2,4-Trimethylbenzene (contaminant)	X	X	X	X
Crystalline silica (cristobalite)	X	X	X	X
Talc	X	X	X	X
Ethylene glycol monopropyl ether	Not Listed	Not Listed	X	X
Titanium dioxide	X	X	X	X
Inert Pigment	Not Listed	Not Listed	Not Listed	X
1,3,5-Trimethylbenzene (contaminant)	X	Not Listed	Not Listed	Not Listed
Cumene (contaminant)	X	X	X	X
Copper Phthalocyanine Compound	Not Listed	Not Listed	X	X
Quartz, crystalline silica	X	X	X	X

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer and / or WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm

Component	CAS-No	Weight %
Titanium dioxide	13463-67-7	5 - 10
Quartz, crystalline silica	14808-60-7	< 0.5
Cumene (contaminant)	98-82-8	1 - 5

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

Component	WHMIS Classifications of Components
Stoddard solvent	B3,D2B
Petroleum naphtha, light aromatic	B3,D2B
1,2,4-Trimethylbenzene (contaminant)	B3
Crystalline silica (cristobalite)	D2A
Talc	D2A
Ethylene glycol monopropyl ether	B3,D1B,D2B
Titanium dioxide	D2A
Inert Pigment	D2A
1,3,5-Trimethylbenzene (contaminant)	B3
Cumene (contaminant)	B2,D2A
Quartz, crystalline silica	D2A

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent	Part 5 Substance Part 5, Other Groups and Mixtures
Petroleum naphtha, light aromatic	Part 5 Substance Part 5, Other Groups and Mixtures

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1,2,4-Trimethylbenzene (contaminant)	Part 4 Substance Part 1, Group 1 Substance Part 5, Individual Substance
Ethylene glycol monopropyl ether	Part 4 Substance
1,3,5-Trimethylbenzene (contaminant)	Part 4 Substance Part 5, Isomer Groups
Cumene (contaminant)	Part 4 Substance Part 1, Group 1 Substance
Copper Phthalocyanine Compound	Part 1, Group 1 Substance

Regulation (EC) No. 1907/2006 (REACH), Article 57

This product does not contain substances of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 57)

HMIS:	Health 2 *	Flammability 3	Reactivity 0	PPE X
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16. OTHER INFORMATION

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Revision Note New MSDS 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 MSDS