



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Jun-23-2011

Revision Date Jun-23-2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28CY
Product name Cyan
Product description Lyson® PhotoChrome® R28 Inkjet 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
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10
Copper Phthalocyanine Compound	Trade Secret	1 - 5

4. FIRST AID MEASURES

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 Move to fresh air. 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 No information available

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³
Copper Phthalocyanine Compound			100 mg/m ³		

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.042
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.688	VOC grams/liter (less water)	120.978
VOC by weight %	11.621	Water by weight	73.92
VOC lbs/gal (less water)	1.01		
Volatile by weight (including Water)	76.59		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h

Chronic Toxicity

No information available

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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

Eyes, Liver, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 <i>Oncorhynchus mykiss</i> : 51000-57000 mg/L	24 Hr EC50 <i>Daphnia magna</i> : >500 mg/L
Copper Phthalocyanine Compound		48 Hr LC50 <i>Oryzias latipes</i> : >100 mg/L [static]	

Persistence and Degradability

No information available

Bioaccumulation

No information available

Mobility in Environmental Media

No information available

Component	log Pow
Glycerol	-1.76
Copper Phthalocyanine Compound	6.6

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

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

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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

This product does not contain any HAPs.

U.S. State Regulations**State Right-to-Know**

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28KL
Product name Light Black
Product description Lyson® PhotoChrome® R28 Inkjet 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
 7 Barton Road
 Heaton Mersey Industrial Estate
 Stockport, Chesire SK4 3EG
 Tel: +44 161 442 2111

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2. HAZARDS IDENTIFICATION

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

Appearance Colored
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10
Diethylene glycol	111-46-6	5 - 10
Triethylene glycol monobutyl ether	143-22-6	1 - 5
Carbon black	1333-86-4	1 - 5

4. FIRST AID MEASURES

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 Move to fresh air. 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

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Flammable Properties	No information available
Suitable Extinguishing Media	Water spray. Foam. Carbon dioxide (CO ₂). Dry chemical. 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³
Carbon black	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³	1750 mg/m ³	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.033
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.61	VOC grams/liter (less water)	549.444
VOC by weight %	53.256	Water by weight	70.3
VOC lbs/gal (less water)	4.585		
Volatile by weight (including Water)	84.88		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h
Diethylene glycol	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	
Triethylene glycol monobutyl ether	5300 mg/kg (Rat)	3480 mg/kg (Rabbit)	
Carbon black	15400 mg/kg (Rat)	3 g/kg (Rabbit)	

Chronic Toxicity

Component	ACGIH	IARC	NTP	OSHA
Carbon black		Group 2B		X

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B). In their evaluation of carbon black, IARC indicates exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

Legend:

IARC: (International Agency for Research on Cancer)
OSHA: (Occupational Safety & Health Administration)

Group 2B - Possibly Carcinogenic to Humans
X - Present

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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	Eyes, Kidney, Lymphatic System, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L
Diethylene glycol		96 Hr LC50 Pimephales promelas: 75200 mg/L [flow-through]	96 Hr EC50 water flea: 0.3 mg/L [Static]; 48 Hr EC50 Daphnia magna: 84000 mg/L
Triethylene glycol monobutyl ether	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L	96 Hr LC50 Leuciscus idus: 2200-4600 mg/L [static]; 96 Hr LC50 Pimephales promelas: 2400 mg/L [static]	48 Hr EC50 Daphnia magna: >500 mg/L
Carbon black			24 Hr EC50 Daphnia magna: >5600 mg/L

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

Component	log Pow
Glycerol	-1.76
Diethylene glycol	-1.98
Triethylene glycol monobutyl ether	0.51

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

14. TRANSPORT INFORMATION**IMDG/IMO**

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION**International Inventories**

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

U.S. 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

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Triethylene glycol monobutyl ether	143-22-6	1 - 5	1.0

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

This product contains the following HAPs:

Component	CAS-No	Weight %
Triethylene glycol monobutyl ether	143-22-6	1 - 5

U.S. State Regulations**California Prop. 65**

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

Component	CAS-No	Weight %
Carbon black	1333-86-4	1 - 5

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Glycerol	Not Listed	Not Listed	X	X	X	X
Diethylene glycol	Not Listed	Not Listed	Not Listed	X	Not Listed	X
Triethylene glycol monobutyl ether	Not Listed	Not Listed	X	X	Not Listed	Not Listed
Carbon black	Not Listed	Not Listed	X	X	X	X

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
Glycerol	Uncontrolled product according to WHMIS classification criteria
Carbon black	D2A

Component	NPRI - National Pollutant Release Inventory
Glycerol	Part 4 Substance
Diethylene glycol	Part 4 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health 1*	Flammability 1	Reactivity 0	PPE X
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16. OTHER INFORMATION

Revision Date Jun-23-2011

Revision Summary 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



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Jun-23-2011

Revision Date Jun-23-2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28CL
Product name Light Cyan
Product description Lyson® PhotoChrome® R28 Inkjet 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
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Website: www.nazdar.com
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2. HAZARDS IDENTIFICATION

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

Appearance Colored
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	10 - 30
Copper Phthalocyanine Compound	Trade Secret	1 - 5

4. FIRST AID MEASURES

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 Move to fresh air. 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 No information available

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³
Copper Phthalocyanine Compound			100 mg/m ³		

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.028
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.574	VOC grams/liter (less water)	163.97
VOC by weight %	15.96	Water by weight	72.01
VOC lbs/gal (less water)	1.368		
Volatile by weight (including Water)	76.15		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h

Chronic Toxicity

No information available

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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

Eyes, Liver, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L
Copper Phthalocyanine Compound		48 Hr LC50 Oryzias latipes: >100 mg/L [static]	

Persistence and Degradability

No information available

Bioaccumulation

No information available

Mobility in Environmental Media

No information available

Component	log Pow
Glycerol	-1.76
Copper Phthalocyanine Compound	6.6

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

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

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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

This product does not contain any HAPs.

U.S. State Regulations**State Right-to-Know**

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28KX
Product name Light Light Black
Product description Lyson® PhotoChrome® R28 Inkjet 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
 7 Barton Road
 Heaton Mersey Industrial Estate
 Stockport, Chesire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10
Diethylene glycol	111-46-6	5 - 10
Triethylene glycol monobutyl ether	143-22-6	1 - 5
Carbon black	1333-86-4	< 0.5

4. FIRST AID MEASURES

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 Move to fresh air. 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

5. FIRE-FIGHTING MEASURES

Flammable Properties	No information available
Suitable Extinguishing Media	Water spray. Foam. Carbon dioxide (CO ₂). Dry chemical. 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³
Carbon black	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³	1750 mg/m ³	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.029
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.578	VOC grams/liter (less water)	595.468
VOC by weight %	57.932	Water by weight	70.22
VOC lbs/gal (less water)	4.969		
Volatile by weight (including Water)	86.28		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h
Diethylene glycol	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	
Triethylene glycol monobutyl ether	5300 mg/kg (Rat)	3480 mg/kg (Rabbit)	
Carbon black	15400 mg/kg (Rat)	3 g/kg (Rabbit)	

Chronic Toxicity

Component	ACGIH	IARC	NTP	OSHA
Carbon black		Group 2B		X

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B). In their evaluation of carbon black, IARC indicates exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

Legend:

IARC: (International Agency for Research on Cancer)
OSHA: (Occupational Safety & Health Administration)

Group 2B - Possibly Carcinogenic to Humans
X - Present

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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	Eyes, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L
Diethylene glycol		96 Hr LC50 Pimephales promelas: 75200 mg/L [flow-through]	96 Hr EC50 water flea: 0.3 mg/L [Static]; 48 Hr EC50 Daphnia magna: 84000 mg/L
Triethylene glycol monobutyl ether	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L	96 Hr LC50 Leuciscus idus: 2200-4600 mg/L [static]; 96 Hr LC50 Pimephales promelas: 2400 mg/L [static]	48 Hr EC50 Daphnia magna: >500 mg/L
Carbon black			24 Hr EC50 Daphnia magna: >5600 mg/L

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

Component	log Pow
Glycerol	-1.76
Diethylene glycol	-1.98
Triethylene glycol monobutyl ether	0.51

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

14. TRANSPORT INFORMATION**IMDG/IMO**

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION**International Inventories**

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

U.S. 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

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Triethylene glycol monobutyl ether	143-22-6	1 - 5	1.0

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

This product contains the following HAPs:

Component	CAS-No	Weight %
Triethylene glycol monobutyl ether	143-22-6	1 - 5

U.S. State Regulations**California Prop. 65**

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

Component	CAS-No	Weight %
Carbon black	1333-86-4	< 0.5

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Glycerol	Not Listed	Not Listed	X	X	X	X
Diethylene glycol	Not Listed	Not Listed	Not Listed	X	Not Listed	X
Triethylene glycol monobutyl ether	Not Listed	Not Listed	X	X	Not Listed	Not Listed
Carbon black	Not Listed	Not Listed	X	X	X	X

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
Glycerol	Uncontrolled product according to WHMIS classification criteria
Carbon black	D2A

Component	NPRI - National Pollutant Release Inventory
Glycerol	Part 4 Substance
Diethylene glycol	Part 4 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health 1*	Flammability 1	Reactivity 0	PPE X
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16. OTHER INFORMATION

Revision Date Jun-23-2011

Revision Summary 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

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28KM
Product name Matte Black
Product description Lyson® PhotoChrome® R28 Inkjet 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
 7 Barton Road
 Heaton Mersey Industrial Estate
 Stockport, Chesire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10
1-Methyl-2-pyrrolidone	872-50-4	1 - 5
Triethylene glycol monobutyl ether	143-22-6	1 - 5

4. FIRST AID MEASURES

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 Move to fresh air. 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 No information available

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³
1-Methyl-2-pyrrolidone				TWA: 400 mg/m ³	

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	Solubility	No information available
Evaporation Rate	No information available	Partition Coefficient (n-octanol/water)	No information available
Vapour Pressure	No information available	Vapour Density	No information available
Flammability (solid, gas)	No information available	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.021
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.51	VOC grams/liter (less water)	177.963
VOC by weight %	17.452	Water by weight	72.4
VOC lbs/gal (less water)	1.485		
Volatile by weight (including Water)	78.95		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h
1-Methyl-2-pyrrolidone	3598 mg/kg (Rat)	2000 mg/kg (Rabbit) 2500 mg/kg (Rat)	3.1 mg/L (Rat) 4 h
Triethylene glycol monobutyl ether	5300 mg/kg (Rat)	3480 mg/kg (Rabbit)	

Chronic Toxicity

No information available

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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

Eyes, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L
1-Methyl-2-pyrrolidone	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L	96 Hr LC50 Lepomis macrochirus: 832 mg/L [static]; 96 Hr LC50 Leuciscus idus: 4000 mg/L [static]; 96 Hr LC50 Pimephales promelas: 1072 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 1400 mg/L [static]	96 Hr EC50 water flea: 3135 mg/L; 48 Hr EC50 Daphnia magna: 4897 mg/L
Triethylene glycol monobutyl ether	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L	96 Hr LC50 Leuciscus idus: 2200-4600 mg/L [static]; 96 Hr LC50 Pimephales promelas: 2400 mg/L [static]	48 Hr EC50 Daphnia magna: >500 mg/L

Persistence and Degradability

No information available

Bioaccumulation

No information available

Mobility in Environmental Media

No information available

Component	log Pow
Glycerol	-1.76
1-Methyl-2-pyrrolidone	-0.46
Triethylene glycol monobutyl ether	0.51

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

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

U.S. 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

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Triethylene glycol monobutyl ether	143-22-6	1 - 5	1.0
1-Methyl-2-pyrrolidone	872-50-4	1 - 5	1.0

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

This product contains the following HAPs:

Component	CAS-No	Weight %
Triethylene glycol monobutyl ether	143-22-6	1 - 5

U.S. State Regulations**California Prop. 65**

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

Component	CAS-No	Weight %
1-Methyl-2-pyrrolidone	872-50-4	1 - 5

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Glycerol	Not Listed	Not Listed	X	X	X	X
1-Methyl-2-pyrrolidone	Not Listed	Not Listed	X	X	X	Not Listed
Triethylene glycol monobutyl ether	Not Listed	Not Listed	X	X	Not Listed	Not Listed

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
Glycerol	Uncontrolled product according to WHMIS classification criteria

Component	NPRI - National Pollutant Release Inventory
Glycerol	Part 4 Substance
1-Methyl-2-pyrrolidone	Part 4 Substance Part 1, Group 1 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health 1*	Flammability 1	Reactivity 0	PPE X
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16. OTHER INFORMATION

Revision Date	Jun-23-2011
Revision Summary	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

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28KP
Product name Photo Black
Product description Lyson® PhotoChrome® R28 Inkjet 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
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Cheshire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10
Diethylene glycol	111-46-6	1 - 5
Triethylene glycol monobutyl ether	143-22-6	1 - 5
Carbon black	1333-86-4	1 - 5

4. FIRST AID MEASURES

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 Move to fresh air. 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

5. FIRE-FIGHTING MEASURES

Flammable Properties	No information available
Suitable Extinguishing Media	Water spray. Foam. Carbon dioxide (CO ₂). Dry chemical. 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³
Carbon black	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³	1750 mg/m ³	TWA: 3.5 mg/m ³	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.038
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.654	VOC grams/liter (less water)	493.409
VOC by weight %	47.581	Water by weight	70.8
VOC lbs/gal (less water)	4.118		
Volatile by weight (including Water)	83.4		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h
Diethylene glycol	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	
Triethylene glycol monobutyl ether	5300 mg/kg (Rat)	3480 mg/kg (Rabbit)	
Carbon black	15400 mg/kg (Rat)	3 g/kg (Rabbit)	

Chronic Toxicity

Component	ACGIH	IARC	NTP	OSHA
Carbon black		Group 2B		X

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B). In their evaluation of carbon black, IARC indicates exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

Legend:

IARC: (International Agency for Research on Cancer)
OSHA: (Occupational Safety & Health Administration)

Group 2B - Possibly Carcinogenic to Humans
X - Present

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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	Eyes, Kidney, Lymphatic System, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L
Diethylene glycol		96 Hr LC50 Pimephales promelas: 75200 mg/L [flow-through]	96 Hr EC50 water flea: 0.3 mg/L [Static]; 48 Hr EC50 Daphnia magna: 84000 mg/L
Triethylene glycol monobutyl ether	72 Hr EC50 Scenedesmus subspicatus: >500 mg/L	96 Hr LC50 Leuciscus idus: 2200-4600 mg/L [static]; 96 Hr LC50 Pimephales promelas: 2400 mg/L [static]	48 Hr EC50 Daphnia magna: >500 mg/L
Carbon black			24 Hr EC50 Daphnia magna: >5600 mg/L

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

Component	log Pow
Glycerol	-1.76
Diethylene glycol	-1.98
Triethylene glycol monobutyl ether	0.51

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

14. TRANSPORT INFORMATION

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

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

U.S. 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

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Triethylene glycol monobutyl ether	143-22-6	1 - 5	1.0

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

This product contains the following HAPs:

Component	CAS-No	Weight %
Triethylene glycol monobutyl ether	143-22-6	1 - 5

U.S. State Regulations

California Prop. 65

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

Component	CAS-No	Weight %
Carbon black	1333-86-4	1 - 5

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Glycerol	Not Listed	Not Listed	X	X	X	X
Diethylene glycol	Not Listed	Not Listed	Not Listed	X	Not Listed	X
Triethylene glycol monobutyl ether	Not Listed	Not Listed	X	X	Not Listed	Not Listed
Carbon black	Not Listed	Not Listed	X	X	X	X

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
Glycerol	Uncontrolled product according to WHMIS classification criteria
Carbon black	D2A

Component	NPRI - National Pollutant Release Inventory
Glycerol	Part 4 Substance
Diethylene glycol	Part 4 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health 1*	Flammability 1	Reactivity 0	PPE X
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16. OTHER INFORMATION

Revision Date Jun-23-2011

Revision Summary 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



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Jun-23-2011

Revision Date Jun-23-2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28VML
Product name Vivid Light Magenta
Product description Lyson® PhotoChrome® R28 Inkjet 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
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10

4. FIRST AID MEASURES

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 Move to fresh air. 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 No information available

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.027
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.557	VOC grams/liter (less water)	160.701
VOC by weight %	15.673	Water by weight	71.84
VOC lbs/gal (less water)	1.341		
Volatile by weight (including Water)	75.96		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h

Chronic Toxicity

No information available

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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	Eyes, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L

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

Component	log Pow
Glycerol	-1.76

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

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

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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

This product does not contain any HAPs.

U.S. State Regulations

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Glycerol	Not Listed	Not Listed	X	X	X	X

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
Glycerol	Uncontrolled product according to WHMIS classification criteria

Component	NPRI - National Pollutant Release Inventory
Glycerol	Part 4 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health	Flammability	Reactivity	PPE
	1*	1	0	X

16. OTHER INFORMATION

Revision Date Jun-23-2011

Revision Summary 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



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Jun-23-2011

Revision Date Jun-23-2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28VMA
Product name Vivid Magenta
Product description Lyson® PhotoChrome® R28 Inkjet 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
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10

4. FIRST AID MEASURES

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 Move to fresh air. 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 No information available

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.044
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.703	VOC grams/liter (less water)	63.622
VOC by weight %	6.101	Water by weight	70.52
VOC lbs/gal (less water)	0.531		
Volatile by weight (including Water)	72.13		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)	570 mg/m ³ (Rat) 1 h

Chronic Toxicity

No information available

Sensitisation	No information available
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	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	Eyes, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Freshwater Algae	Freshwater Fish	Water Flea
Glycerol		96 Hr LC50 Oncorhynchus mykiss: 51000-57000 mg/L	24 Hr EC50 Daphnia magna: >500 mg/L

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

Component	log Pow
Glycerol	-1.76

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

Printing Ink, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

International Inventories

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

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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

This product does not contain any HAPs.

U.S. State Regulations

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Glycerol	Not Listed	Not Listed	X	X	X	X

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
Glycerol	Uncontrolled product according to WHMIS classification criteria

Component	NPRI - National Pollutant Release Inventory
Glycerol	Part 4 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health	Flammability	Reactivity	PPE
	1*	1	0	X

16. OTHER INFORMATION

Revision Date Jun-23-2011

Revision Summary 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



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Jun-23-2011

Revision Date Jun-23-2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product code LPAPHR28YE
Product name Yellow
Product description Lyson® PhotoChrome® R28 Inkjet 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
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire 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
Emergency Overview Irritant.

Eyes May cause eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Glycerol	56-81-5	5 - 10

4. FIRST AID MEASURES

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 Move to fresh air. 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 No information available

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). 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. Keep container tightly closed. 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. 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. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
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. Take notice of the directions of use on the label. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Glycerol	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³ TWA: 15 mg/m ³		TWA: 10 mg/m ³	TWA: 10 mg/m ³

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. 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. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	7-9	Autoignition Temperature	No information available
Boiling point/Boiling Range	>100°C / >212°F	Melting Point/Range	No information available
Freezing Point/Range	0°C / 32°F	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	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Photochemically Reactive	No
Upper	No information available	Specific Gravity	1.04
Lower	No information available	VOC by volume %	No information available
Weight Per Gallon (lbs/gal)	8.674	VOC grams/liter (less water)	116.326
VOC by weight %	11.192	Water by weight	74.13
VOC lbs/gal (less water)	0.971		
Volatile by weight (including Water)	76.69		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Do not freeze.
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 (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

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