



Please take these actions:

1. Review the Safety Data Sheets included below in this file and ensure that you understand the hazards of these products. Ask your supervisor if you require further information.
2. Click on the 'Acknowledgement' tab and electronically sign-off that you understand and will comply with required safety precautions.

Thank you!

First, review the SDS sheets for understand, then acknowledge compliance.

A screenshot of a software interface. At the top, there is a blue bar with the text "Standard Operating Procedure". Below this is a dark grey bar with a hamburger menu icon and the text "Material Safety Data Sheet". Below that is another blue bar with the text "Acknowledgement". At the bottom, there is a green checkmark icon in a circle, followed by a radio button and the text "I acknowledge compliance". Two green arrows point to the "Standard Operating Procedure" and "Acknowledgement" tabs from the left.



## Safety Data Sheet

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product ID / Name:** 8440 - UV RELEASE COATING  
**Recommended Use:** Printing Ink  
**Company Name:** Zeller+Gmelin Corporation  
**Address:** 4801 Audubon Drive, Richmond, Virginia 23231 USA  
**Telephone:** (800) 84UV INK (800-848-8465)  
**Email:** msds@zeller-gmelin.com  
**Internet:** <http://www.zeller-gmelin.com>  
**Emergency Contact:** CHEMTREC, (800) 424-9300  
CHEMTREC International and Maritime, +1 (703) 527-3887

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**Appearance and Odor:**  
**Color:** OTHER  
**Appearance:** Liquid  
**Odor:** Ester Like

#### LABEL ELEMENTS

GHS-US labeling

#### HAZARD STATEMENTS

**Signal Word:** DANGER !

**Hazard Pictogram:**



Irritant



Health Hazard



Corrosive

H302: Harmful if swallowed  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H318: Causes serious eye damage  
H351: Suspected of causing cancer  
H360: May damage fertility or the unborn child  
H373: May cause damage to organs through prolonged or repeated exposure

#### PRECAUTIONARY STATEMENTS

P264: Wash thoroughly with soap and water after handling.  
P270: Do not eat, drink, or smoke when using this product.  
P272: Contaminated work clothing should be restricted to the workplace. Wash contaminated clothing before reuse.  
P280: Wear protective gloves / protective clothing / eye protection / face protection.  
IF ON SKIN: Wash thoroughly with soap and water. If skin irritation or rash occurs, seek medical advice /attention.  
IF IN EYES: Flush with copious amounts of water for at least 15 minutes, and seek medical advice / attention.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### POTENTIAL HEALTH EFFECTS OF EXPOSURE

**Inhalation:** Low volatile organic compound (VOC) content makes inhalation problems unlikely at room temperature; however, elevated temperatures and/or aerosol formation may lead to irritation of the lungs.  
**Skin:** Contains materials that may cause moderate skin injury (reddening and swelling). Prolonged contact may cause blister formation and in some cases skin sensitization may occur.  
**Ingestion:** Contains materials that may be slightly toxic.



Eyes: May cause severe pain and irritation upon direct exposure. Risk of permanent damage to eyes.

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

CAS # / EC #	Chemical Name	Quantity - %
Trade Secret	Acrylated amine	5 - 20
Trade Secret	Polyester acrylate	20 - 40
119-61-9	Benzophenone	5 - 20
141-32-2	n-Butyl acrylate	< 1
Trade Secret	Surfactant additive	5 - 20
163702-01-0	Oligo [2-hydroxy-2-methyl-1-[4-(1-methylvinyl) phenyl] propa	1 - 5
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate	20 - 40
71868-10-5	2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropanone	1 - 5
75980-60-8	Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	< 1

Specific composition and formulation of products are considered trade secrets; however, upon request, specific information may be provided to medical facilities and industrial hygienists. Carcinogens are specifically noted in Section 11 if present. Carcinogen is defined as listed by International Agency for Research on Cancer (IARC), National Toxicology Program (NTP), American Conference of Governmental Industrial Hygienists (ACGIH), or Occupational Safety & Health Administration (OSHA).

### 4. FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If breathing is difficult or persistent symptoms, seek medical assistance / call a physician.

**Skin:** Wash affected areas thoroughly with soap and warm water. Remove contaminated clothing and footwear without delay. Contaminated clothing must be thoroughly laundered before reuse. Destroy or thoroughly clean contaminated footwear before reuse. Do not remove contaminated clothing or footwear from the workplace.

**Ingestion:** Consult medical assistance / local poison control center / physician promptly. Never give anything by mouth to an unconscious person. Only induce vomiting at the instruction of a physician.

**Eyes:** Flush eyes with water for at least 15 minutes and consult medical assistance / physician promptly. Do not rub eyes. Remove contact lens, if present and easy to do. Continue rinsing. This may contain materials that are capable of causing eye injury.

**General:** In all cases of doubt or when symptoms persist, seek medical attention.

### 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media:** Water spray or fog, carbon dioxide or dry chemical fire extinguishers.

**Extinguishing media to avoid:** High-pressure water jet as this will spread the fire.

**Protective equipment:** Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS section 8 (Exposure Controls / Personal Protection)

**Special Hazards:** Keep containers cool by spraying with water if exposed to fire. During fire, gases hazardous to health may be formed.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear protective clothing, eye protection, respirator, and impermeable boots – refer to Section 8 – Exposure Controls / Personal Protection.

**In the event of material release or spillage:** Pick up any material with liquid binding or inert absorbent material. Sweep up and place in a waste disposal container. Advise environmental authorities if spillage has entered waterways or drainage system.

### 7. HANDLING AND STORAGE

**Precautionary measures:** Store in closed containers away from heat and open flame.  
Store at room temperature, between 68°F - 86°F (20°C-30°C) and not to exceed 95°F (35°C)



- Avoid breathing mist.
- Avoid exposure to personnel as indicated.
- Use in a ventilated area
- Wear protective clothing.
- Decontaminate area as required.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters – Components with limit values that require monitoring at the workplace.

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

OSHA - PEL or ACGIH - TLV:

OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and other exposure limits have not been established for this product.

Exposure Controls

Respiratory Protection: (Specify Type):  
Ventilation:

No special precautions needed with adequate ventilation.  
Local Exhaust: Preferable  
Mechanical (General): Preferable

Protective Gloves:

Solvent-resistant protective gloves if contact is likely. Nitrile rubber recommended.

Eye Protection:

Safety glasses with side shields / splash goggles

Other protective clothing and/or equipment:

Wear impermeable boots if exposure levels warrant.

Work/Hygienic Practices:

Avoid contact with skin and eyes. Wash hands before handling food.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color	OTHER
Physical State (Appearance)	Liquid
Odor	Ester Like
Odor Threshold	N/A
Boiling Point	N/A, decomposes or polymerizes first
Melting Point	N/A
Vapor Pressure (mm Hg)	N/A
Vapor Density	N/A
Viscosity (Kinematic)	N/A
Saturation in Air (% by volume)	N/A
Evaporation Rate (Bu.Ac.=1)	<1
Specific Gravity (Relative Density)	1.09
pH	N/A
Solubility in Water	N/A
Partition Coefficient: n-octanol/water	N/A
Percent Volatile VOC (% by wt.)	<1% w/w
Flash Point	>212°F (>100°C)
Flammability (solid, gas)	N/A
Decomposition temperature	N/A
Auto ignition temperature	N/A

## 10. STABILITY AND REACTIVITY

Stability:	Stable under normal storage and transportation conditions
Conditions to Avoid:	Exposure to sunlight or other sources of UV radiation, exposure to ionizing radiation. Heat, flames, and sparks. Contact with incompatible materials.
Incompatibility: (Materials to Avoid):	Avoid mixing with vigorous oxidizing materials, peroxides, strong bases and alkalis.
Hazardous Decomposition / By-products:	No hazardous decompositions products are known during normal usage.



Hazardous Polymerization:

High temperatures and/or fire conditions may cause rapid and uncontrolled polymerization.

## 11. TOXICOLOGICAL INFORMATION

Toxicological information for these products is also found under Section 2, HAZARDS IDENTIFICATION.

The toxicological information on these products has not been fully investigated. Direct contact with this material may cause moderate to severe irritation of the skin, eyes, respiratory and moderate irritation of the gastrointestinal tract. A minor component, CAS # 163702-01-0, is a Category 2 reproductive toxin (H361f) with suspected impact on fertility. A minor component, CAS # 75980-60-8, is a Category 2 reproductive toxin (H361f) with suspected impact on fertility. A minor component, CAS # 71868-10-5, is linked in pure form to impairment of fertility (Cat.2) and embryo toxicity (Cat.1B) in animal studies (H360df). Component, CAS# 119-61-9, may cause damage to organs through prolonged or repeated exposure through inhalation and contact (H373) and is suspected of causing cancer (IARC 2B) (H351).

## 12. ECOLOGICAL INFORMATION

Toxicity:	The ecological properties of these products have not been fully investigated.
Persistence and Degradability:	Not established
Bio-accumulative Potential:	Not established
Mobility in Soil:	No additional information is available
Other information:	Do not release to the environment. A minor component has been classed as an aquatic toxin. Avoid entry of this product into drains and waterways.

## 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Do not allow product to enter drainage system. Dispose of in accordance with local, State and Federal regulations. Incineration is the preferred method. Contact a professional environmental disposal company in your area. Refer to guidelines in the Resource Conservation & Recovery Act (RCRA).
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## 14. TRANSPORT INFORMATION

Refer to appropriate local, state or national transport regulations for specific requirements.

US DOT:	Not Regulated
Transport Canada:	Not Regulated
Air Transport (ICAO / IATA):	Not Regulated
Sea Transport (IMDG / IMO):	Not Regulated

## 15. REGULATORY INFORMATION

### Inventory Information - TSCA

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are exempt from listing on the TSCA Chemical Inventory.

**CERCLA Hazardous Substance List (40 CFR 302.4)** Not Applicable

**Heavy Metals** – Products meet CONEG requirements.

### SARA Hazard Notification

Hazard categories under Title III Rules (40 CFR 370)	<input checked="" type="checkbox"/> Immediate Health (Acute)	<input checked="" type="checkbox"/> Reactive
Section 311 / 312:	<input checked="" type="checkbox"/> Delayed Health (Chronic)	<input type="checkbox"/> Fire Hazard
	<input type="checkbox"/> Sudden Pressure Release	<input type="checkbox"/> None
Section 302 Extremely Hazardous Substances:	Not Applicable	
Section 313 Toxic Chemical(s):		

Cyclohexane	CAS# 110-82-7	0.00783%
n-Butyl acrylate	CAS# 141-32-2	0.0193%

### OSHA Hazard Communication Standard

(29 CFR 1910.1200):  Irritant  Unstable Reactive



## California Proposition 65

Products may contain trace levels of chemicals known to the State of California to cause cancer or reproductive harm. The estimated level of reported Prop 65 components is:

Methyl isobutyl ketone	CAS# 108-10-1	0.000291%
Toluene	CAS# 108-88-3	0.06956585%
Benzophenone	CAS# 119-61-9	6.76%
Bisphenol A	CAS# 80-05-7	0.00000485%

## International Regulations

Chemical Weapons Convention:	Covered products do not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.
Hazards to the Ozone Layer	Covered products do not contain substances identified as causing damage to the ozone layer, including CFC or HCFC. Reference the Montreal Protocol.
PFC (perfluorinated chemicals)	Covered products do not contain long -chain (PFCs).
R.E.A.C.H.:	Covered products do not contain reportable amounts (>0.1%) of any materials known on the REACH Authorization List (Annex XIV) or the REACH Restricted List (Annex XVII) of substances as issued by the European Chemical Agency (ECHA). Products manufactured in the EU comply with REACH Directive 1907/2006 EC.
RoHS (Restriction of Hazardous Substances):	Covered products allow for compliance with the current RoHS Directive restricting the use of certain hazardous substances in electrical and electronic equipment, medical devices and monitoring and control instruments, and certain cables. Products are well below the maximum concentration limits of lead (0.1%), mercury (0.1%), cadmium (0.01%), hexavalent chromium (0.1%), polybrominated biphenyls [PBB] (0.1%), polybrominated diphenyl ethers [PBDE] (0.1%) and listed phthalates.

## Canada Regulations

Workplace Hazardous Materials Information System:	(WHMIS Classification): This product is not WHMIS controlled.
Domestic Substances List (DSL):	Components are either exempt or listed on the DSL. Exceptions noted below.
Non-Domestic Substances List (NDSL):	Approximately 42% of product components are NDSL listed. This product contains components that are not DSL or NDSL listed, 0%.

## 16. OTHER INFORMATION

**Last Revision:** 27 April 2021

**Supersedes:** First Edition

**Prepared by:** Regulatory Affairs, R&D

NOTE: The information herein is given in good faith and is believed to be accurate as of the date prepared. No warranty, expressed or implied, is made. It is the responsibility of the user to determine if products are suitable for their applications. This document prepared in accordance with OSHA, 29 CFR 1910.1200(g) and Appendix D. United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), current edition, United Nations. "This is an automatically generated SDS. Should you have a question about content information please contact: [msds@zeller-gmelin.com](mailto:msds@zeller-gmelin.com) "



## Safety Data Sheet

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product ID / Name:** CD1777476 - LM LED OPAQUE WHITE MPS  
**Recommended Use:** Printing Ink  
**Company Name:** Zeller+Gmelin Corporation  
**Address:** 4801 Audubon Drive, Richmond, Virginia 23231 USA  
**Telephone:** (800) 84UV INK (800-848-8465)  
**Email:** msds@zeller-gmelin.com  
**Internet:** <http://www.zeller-gmelin.com>  
**Emergency Contact:** CHEMTREC, (800) 424-9300  
CHEMTREC International and Maritime, +1 (703) 527-3887

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**Appearance and Odor:**  
**Color:** WHITE  
**Appearance:** Liquid  
**Odor:** Ester Like

#### LABEL ELEMENTS

GHS-US labeling

#### HAZARD STATEMENTS

**Signal Word:** DANGER !

**Hazard Pictogram:**



Irritant



Health Hazard



Corrosive

H302: Harmful if swallowed  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H318: Causes serious eye damage  
H360: May damage fertility or the unborn child

#### PRECAUTIONARY STATEMENTS

P264: Wash thoroughly with soap and water after handling.  
P270: Do not eat, drink, or smoke when using this product.  
P272: Contaminated work clothing should be restricted to the workplace. Wash contaminated clothing before reuse.  
P280: Wear protective gloves / protective clothing / eye protection / face protection.  
IF ON SKIN: Wash thoroughly with soap and water. If skin irritation or rash occurs, seek medical advice /attention.  
IF IN EYES: Flush with copious amounts of water for at least 15 minutes, and seek medical advice / attention.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### POTENTIAL HEALTH EFFECTS OF EXPOSURE

**Inhalation:** Low volatile organic compound (VOC) content makes inhalation problems unlikely at room temperature; however, elevated temperatures and/or aerosol formation may lead to irritation of the lungs.  
**Skin:** Contains materials that may cause moderate skin injury (reddening and swelling). Prolonged contact may cause blister formation and in some cases skin sensitization may occur.  
**Ingestion:** Contains materials that may be slightly toxic.  
**Eyes:** May cause severe pain and irritation upon direct exposure. Risk of permanent damage to eyes.



### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

CAS # / EC #	Chemical Name	Quantity - %
Trade Secret	Multifunctional acrylate diluent	5 - 20
Trade Secret	Acrylated amine	5 - 20
21245-02-3	Aminobenzoate photoinitiator	1 - 5
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate	5 - 20

Specific composition and formulation of products are considered trade secrets; however, upon request, specific information may be provided to medical facilities and industrial hygienists. Carcinogens are specifically noted in Section 11 if present. Carcinogen is defined as listed by International Agency for Research on Cancer (IARC), National Toxicology Program (NTP), American Conference of Governmental Industrial Hygienists (ACGIH), or Occupational Safety & Health Administration (OSHA).

### 4. FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If breathing is difficult or persistent symptoms, seek medical assistance / call a physician.

**Skin:** Wash affected areas thoroughly with soap and warm water. Remove contaminated clothing and footwear without delay. Contaminated clothing must be thoroughly laundered before reuse. Destroy or thoroughly clean contaminated footwear before reuse. Do not remove contaminated clothing or footwear from the workplace.

**Ingestion:** Consult medical assistance / local poison control center / physician promptly. Never give anything by mouth to an unconscious person. Only induce vomiting at the instruction of a physician.

**Eyes:** Flush eyes with water for at least 15 minutes and consult medical assistance / physician promptly. Do not rub eyes. Remove contact lens, if present and easy to do. Continue rinsing. This may contain materials that are capable of causing eye injury.

**General:** In all cases of doubt or when symptoms persist, seek medical attention.

### 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media:** Water spray or fog, carbon dioxide or dry chemical fire extinguishers.

**Extinguishing media to avoid:** High-pressure water jet as this will spread the fire.

**Protective equipment:** Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS section 8 (Exposure Controls / Personal Protection)

**Special Hazards:** Keep containers cool by spraying with water if exposed to fire. During fire, gases hazardous to health may be formed.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear protective clothing, eye protection, respirator, and impermeable boots – refer to Section 8 – Exposure Controls / Personal Protection.

**In the event of material release or spillage:** Pick up any material with liquid binding or inert absorbent material. Sweep up and place in a waste disposal container. Advise environmental authorities if spillage has entered waterways or drainage system.

### 7. HANDLING AND STORAGE

**Precautionary measures:**

- Store in closed containers away from heat and open flame.
- Store at room temperature, between 68°F - 86°F (20°C-30°C) and not to exceed 95°F (35°C)
- Avoid breathing mist.
- Avoid exposure to personnel as indicated.
- Use in a ventilated area
- Wear protective clothing.
- Decontaminate area as required.



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters – Components with limit values that require monitoring at the workplace.

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

OSHA - PEL or ACGIH - TLV:

OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and other exposure limits have not been established for this product.

Exposure Controls

Respiratory Protection: (Specify Type):  
Ventilation:

No special precautions needed with adequate ventilation.

Local Exhaust: Preferable

Mechanical (General): Preferable

Protective Gloves:

Solvent-resistant protective gloves if contact is likely. Nitrile rubber recommended.

Eye Protection:

Safety glasses with side shields / splash goggles

Other protective clothing and/or equipment:

Wear impermeable boots if exposure levels warrant.

Work/Hygienic Practices:

Avoid contact with skin and eyes. Wash hands before handling food.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color	WHITE
Physical State (Appearance)	Liquid
Odor	Ester Like
Odor Threshold	N/A
Boiling Point	N/A, decomposes or polymerizes first
Melting Point	N/A
Vapor Pressure (mm Hg)	N/A
Vapor Density	N/A
Viscosity (Kinematic)	N/A
Saturation in Air (% by volume)	N/A
Evaporation Rate (Bu.Ac.=1)	<1
Specific Gravity (Relative Density)	2.66
pH	N/A
Solubility in Water	N/A
Partition Coefficient: n-octanol/water	N/A
Percent Volatile VOC (% by wt.)	<1% w/w
Flash Point	>212°F (>100°C)
Flammability (solid, gas)	N/A
Decomposition temperature	N/A
Auto ignition temperature	N/A

## 10. STABILITY AND REACTIVITY

Stability:	Stable under normal storage and transportation conditions
Conditions to Avoid:	Exposure to sunlight or other sources of UV radiation, exposure to ionizing radiation. Heat, flames, and sparks. Contact with incompatible materials.
Incompatibility: (Materials to Avoid):	Avoid mixing with vigorous oxidizing materials, peroxides, strong bases and alkalis.
Hazardous Decomposition / By-products:	No hazardous decomposition products are known during normal usage.
Hazardous Polymerization:	High temperatures and/or fire conditions may cause rapid and uncontrolled polymerization.

## 11. TOXICOLOGICAL INFORMATION

Toxicological information for these products is also found under Section 2, HAZARDS IDENTIFICATION.

The toxicological information on these products has not been fully investigated. Direct contact with this material may cause moderate to severe irritation of the skin, eyes, respiratory and moderate irritation of the gastrointestinal tract. There are no reportable quantities of carcinogenic



substances as defined by IARC, NTP, ACGIH, or OSHA health organizations. reproductive toxin (H360) with developmental toxicity.

A minor component, CAS#21245-02-3, is a Category 1B

## 12. ECOLOGICAL INFORMATION

Toxicity:	The ecological properties of these products have not been fully investigated.
Persistence and Degradability:	Not established
Bio-accumulative Potential:	Not established
Mobility in Soil:	No additional information is available
Other information:	Do not release to the environment. A minor component has been classed as an aquatic toxin. Avoid entry of this product into drains and waterways.

## 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Do not allow product to enter drainage system. Dispose of in accordance with local, State and Federal regulations. Incineration is the preferred method. Contact a professional environmental disposal company in your area. Refer to guidelines in the Resource Conservation & Recovery Act (RCRA).
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## 14. TRANSPORT INFORMATION

Refer to appropriate local, state or national transport regulations for specific requirements.

US DOT:	Not Regulated
Transport Canada:	Not Regulated
Air Transport (ICAO / IATA):	Not Regulated
Sea Transport (IMDG / IMO):	Not Regulated

## 15. REGULATORY INFORMATION

### Inventory Information - TSCA

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are exempt from listing on the TSCA Chemical Inventory.

**CERCLA Hazardous Substance List (40 CFR 302.4)** Not Applicable

**Heavy Metals** – Products meet CONEG requirements.

### SARA Hazard Notification

Hazard categories under Title III Rules (40 CFR 370)	<input checked="" type="checkbox"/> Immediate Health (Acute)	<input checked="" type="checkbox"/> Reactive
Section 311 / 312:	<input checked="" type="checkbox"/> Delayed Health (Chronic)	<input type="checkbox"/> Fire Hazard
	<input type="checkbox"/> Sudden Pressure Release	<input type="checkbox"/> None
Section 302 Extremely Hazardous Substances:	Not Applicable	

Section 313 Toxic Chemical(s):

Cyclohexane	CAS# 110-82-7	0.01746%
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### OSHA Hazard Communication Standard

(29 CFR 1910.1200):  Irritant  Unstable Reactive

### California Proposition 65

Products may contain trace levels of chemicals known to the State of California to cause cancer or reproductive harm. The estimated level of reported Prop 65 components is:

Methyl isobutyl ketone	CAS# 108-10-1	0.0097%
Toluene	CAS# 108-88-3	0.03540888%
1,4-Dioxane	CAS# 123-91-1	0.0002619%
Titanium dioxide	CAS# 13463-67-7	52.14429%
Methanol	CAS# 67-56-1	0.06%
Benzene	CAS# 71-43-2	0.0003492%
Ethylene oxide	CAS# 75-21-8	0.0002619%



Cumene	CAS# 98-82-8	0.00776%
Trace Pb, Cd and/or other metals	CAS# CAS NOT GIVEN	0.00052671%

### International Regulations

Chemical Weapons Convention:	Covered products do not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.
Hazards to the Ozone Layer	Covered products do not contain substances identified as causing damage to the ozone layer, including CFC or HCFC. Reference the Montreal Protocol.
PFC (perfluorinated chemicals)	Covered products do not contain long -chain (PFCs).
R.E.A.C.H.:	Covered products do not contain reportable amounts (>0.1%) of any materials known on the REACH Authorization List (Annex XIV) or the REACH Restricted List (Annex XVII) of substances as issued by the European Chemical Agency (ECHA). Products manufactured in the EU comply with REACH Directive 1907/2006 EC.
SVHC (present):	
Authorization:	None
Restricted:	None
RoHS (Restriction of Hazardous Substances):	Covered products allow for compliance with the current RoHS Directive restricting the use of certain hazardous substances in electrical and electronic equipment, medical devices and monitoring and control instruments, and certain cables. Products are well below the maximum concentration limits of lead (0.1%), mercury (0.1%), cadmium (0.01%), hexavalent chromium (0.1%), polybrominated biphenyls [PBB] (0.1%), polybrominated diphenyl ethers [PBDE] (0.1%) and listed phthalates.

### Canada Regulations

Workplace Hazardous Materials Information System:	(WHMIS Classification): This product is not WHMIS controlled.
Domestic Substances List (DSL):	Components are either exempt or listed on the DSL. Exceptions noted below.
Non-Domestic Substances List (NDSL):	Approximately 3% of product components are NDSL listed. This product contains components that are not DSL or NDSL listed, 0%.

## 16. OTHER INFORMATION

<b>Last Revision:</b> 5 August 2022	<b>Supersedes:</b> First Edition
<b>Prepared by:</b> Regulatory Affairs, R&D	

NOTE: The information herein is given in good faith and is believed to be accurate as of the date prepared. No warranty, expressed or implied, is made. It is the responsibility of the user to determine if products are suitable for their applications. This document prepared in accordance with OSHA, 29 CFR 1910.1200(g) and Appendix D. United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), current edition, United Nations. "This is an automatically generated SDS. Should you have a question about content information please contact: [msds@zeller-gmelin.com](mailto:msds@zeller-gmelin.com) "



## Safety Data Sheet

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product ID / Name:** CD8474433 - UV FLEXO SATIN VARNISH @ 4.0  
**Recommended Use:** Printing Ink  
**Company Name:** Zeller+Gmelin Corporation  
**Address:** 4801 Audubon Drive, Richmond, Virginia 23231 USA  
**Telephone:** (800) 84UV INK (800-848-8465)  
**Email:** msds@zeller-gmelin.com  
**Internet:** <http://www.zeller-gmelin.com>  
**Emergency Contact:** CHEMTREC, (800) 424-9300  
CHEMTREC International and Maritime, +1 (703) 527-3887

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**Appearance and Odor:**  
**Color:** OTHER  
**Appearance:** Liquid  
**Odor:** Ester Like

#### LABEL ELEMENTS

GHS-US labeling

#### HAZARD STATEMENTS

**Signal Word:** DANGER !

**Hazard Pictogram:**



Irritant



Health Hazard



Corrosive

H302: Harmful if swallowed  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H318: Causes serious eye damage  
H360: May damage fertility or the unborn child  
H373: May cause damage to organs through prolonged or repeated exposure

#### PRECAUTIONARY STATEMENTS

P264: Wash thoroughly with soap and water after handling.  
P270: Do not eat, drink, or smoke when using this product.  
P272: Contaminated work clothing should be restricted to the workplace. Wash contaminated clothing before reuse.  
P280: Wear protective gloves / protective clothing / eye protection / face protection.  
IF ON SKIN: Wash thoroughly with soap and water. If skin irritation or rash occurs, seek medical advice /attention.  
IF IN EYES: Flush with copious amounts of water for at least 15 minutes, and seek medical advice / attention.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### POTENTIAL HEALTH EFFECTS OF EXPOSURE

**Inhalation:** Low volatile organic compound (VOC) content makes inhalation problems unlikely at room temperature; however, elevated temperatures and/or aerosol formation may lead to irritation of the lungs.  
**Skin:** Contains materials that may cause moderate skin injury (reddening and swelling). Prolonged contact may cause blister formation and in some cases skin sensitization may occur.  
**Ingestion:** Contains materials that may be slightly toxic.  
**Eyes:** May cause severe pain and irritation upon direct exposure. Risk of permanent damage to eyes.

**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

CAS # / EC #	Chemical Name	Quantity - %
Trade Secret	Amine acrylate	1 - 5
Trade Secret	Acrylated amine	5 - 20
Trade Secret	Polyester acrylate	1 - 5
108-65-6	1-Methoxy-2-propanol acetate	< 1
15625-89-5	Trimethylolpropane triacrylate	5 - 20
28961-43-5	Ethoxylated trimethylolpropane triacrylate	20 - 40
52408-84-1	Propoxylated Glyceryl Triacrylate	1 - 5
55818-57-0	Epoxy Acrylate	5 - 20
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate	5 - 20
606-28-0	Methyl-2-benzoylbenzoate	1 - 5
71868-10-5	2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropanone	< 1
75980-60-8	Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	1 - 5

Specific composition and formulation of products are considered trade secrets; however, upon request, specific information may be provided to medical facilities and industrial hygienists. Carcinogens are specifically noted in Section 11 if present. Carcinogen is defined as listed by International Agency for Research on Cancer (IARC), National Toxicology Program (NTP), American Conference of Governmental Industrial Hygienists (ACGIH), or Occupational Safety & Health Administration (OSHA).

**4. FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. If breathing is difficult or persistent symptoms, seek medical assistance / call a physician.

**Skin:** Wash affected areas thoroughly with soap and warm water. Remove contaminated clothing and footwear without delay. Contaminated clothing must be thoroughly laundered before reuse. Destroy or thoroughly clean contaminated footwear before reuse. Do not remove contaminated clothing or footwear from the workplace.

**Ingestion:** Consult medical assistance / local poison control center / physician promptly. Never give anything by mouth to an unconscious person. Only induce vomiting at the instruction of a physician.

**Eyes:** Flush eyes with water for at least 15 minutes and consult medical assistance / physician promptly. Do not rub eyes. Remove contact lens, if present and easy to do. Continue rinsing. This may contain materials that are capable of causing eye injury.

**General:** In all cases of doubt or when symptoms persist, seek medical attention.

**5. FIRE FIGHTING MEASURES**

**Suitable extinguishing media:** Water spray or fog, carbon dioxide or dry chemical fire extinguishers.

**Extinguishing media to avoid:** High-pressure water jet as this will spread the fire.

**Protective equipment:** Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See SDS section 8 (Exposure Controls / Personal Protection)

**Special Hazards:** Keep containers cool by spraying with water if exposed to fire. During fire, gases hazardous to health may be formed.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Wear protective clothing, eye protection, respirator, and impermeable boots – refer to Section 8 – Exposure Controls / Personal Protection.

**In the event of material release or spillage:** Pick up any material with liquid binding or inert absorbent material. Sweep up and place in a waste disposal container. Advise environmental authorities if spillage has entered waterways or drainage system.

**7. HANDLING AND STORAGE**

**Precautionary measures:** Store in closed containers away from heat and open flame.



Store at room temperature, between 68°F - 86°F (20°C-30°C) and not to exceed 95°F (35°C)

Avoid breathing mist.

Avoid exposure to personnel as indicated.

Use in a ventilated area

Wear protective clothing.

Decontaminate area as required.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters – Components with limit values that require monitoring at the workplace.

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

OSHA - PEL or ACGIH - TLV:

OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and other exposure limits have not been established for this product.

Exposure Controls

Respiratory Protection: (Specify Type):  
Ventilation:

No special precautions needed with adequate ventilation.

Local Exhaust: Preferable

Mechanical (General): Preferable

Protective Gloves:

Solvent-resistant protective gloves if contact is likely. Nitrile rubber recommended.

Eye Protection:

Safety glasses with side shields / splash goggles

Other protective clothing and/or equipment:

Wear impermeable boots if exposure levels warrant.

Work/Hygienic Practices:

Avoid contact with skin and eyes. Wash hands before handling food.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color	OTHER
Physical State (Appearance)	Liquid
Odor	Ester Like
Odor Threshold	N/A
Boiling Point	N/A, decomposes or polymerizes first
Melting Point	N/A
Vapor Pressure (mm Hg)	N/A
Vapor Density	N/A
Viscosity (Kinematic)	N/A
Saturation in Air (% by volume)	N/A
Evaporation Rate (Bu.Ac.=1)	<1
Specific Gravity (Relative Density)	1.15
pH	N/A
Solubility in Water	N/A
Partition Coefficient: n-octanol/water	N/A
Percent Volatile VOC (% by wt.)	<1% w/w
Flash Point	>212°F (>100°C)
Flammability (solid, gas)	N/A
Decomposition temperature	N/A
Auto ignition temperature	N/A

## 10. STABILITY AND REACTIVITY

Stability:	Stable under normal storage and transportation conditions
Conditions to Avoid:	Exposure to sunlight or other sources of UV radiation, exposure to ionizing radiation. Heat, flames, and sparks. Contact with incompatible materials.
Incompatibility: (Materials to Avoid):	Avoid mixing with vigorous oxidizing materials, peroxides, strong bases and alkalis.
Hazardous Decomposition / By-products:	No hazardous decompositions products are known during normal usage.
Hazardous Polymerization:	High temperatures and/or fire conditions may cause rapid and uncontrolled polymerization.



## 11. TOXICOLOGICAL INFORMATION

Toxicological information for these products is also found under Section 2, HAZARDS IDENTIFICATION.

The toxicological information on these products has not been fully investigated. Direct contact with this material may cause moderate to severe irritation of the skin, eyes, respiratory and moderate irritation of the gastrointestinal tract. There are no reportable quantities of carcinogenic substances as defined by IARC, NTP, ACGIH, or OSHA health organizations. A minor component, CAS # 75980-60-8, is a Category 2 reproductive toxin (H361f) with suspected impact on fertility. A minor component, CAS # 71868-10-5, is linked in pure form to impairment of fertility (Cat.2) and embryo toxicity (Cat.1B) in animal studies (H360df). A minor component, CAS# 606-28-0, may cause damage to organs through prolonged or repeated exposure through inhalation and contact (H373).

## 12. ECOLOGICAL INFORMATION

Toxicity:	The ecological properties of these products have not been fully investigated.
Persistence and Degradability:	Not established
Bio-accumulative Potential:	Not established
Mobility in Soil:	No additional information is available
Other information:	Do not release to the environment. A minor component has been classed as an aquatic toxin. Avoid entry of this product into drains and waterways.

## 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Do not allow product to enter drainage system. Dispose of in accordance with local, State and Federal regulations. Incineration is the preferred method. Contact a professional environmental disposal company in your area. Refer to guidelines in the Resource Conservation & Recovery Act (RCRA).
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## 14. TRANSPORT INFORMATION

Refer to appropriate local, state or national transport regulations for specific requirements.

US DOT:	Not Regulated
Transport Canada:	Not Regulated
Air Transport (ICAO / IATA):	Not Regulated
Sea Transport (IMDG / IMO):	Not Regulated

## 15. REGULATORY INFORMATION

### Inventory Information - TSCA

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are exempt from listing on the TSCA Chemical Inventory.

**CERCLA Hazardous Substance List (40 CFR 302.4)** Not Applicable

**Heavy Metals** – Products meet CONEG requirements.

### SARA Hazard Notification

Hazard categories under Title III Rules (40 CFR 370)	<input checked="" type="checkbox"/> Immediate Health (Acute)	<input checked="" type="checkbox"/> Reactive
Section 311 / 312:	<input checked="" type="checkbox"/> Delayed Health (Chronic)	<input type="checkbox"/> Fire Hazard
	<input type="checkbox"/> Sudden Pressure Release	<input type="checkbox"/> None
Section 302 Extremely Hazardous Substances:	Not Applicable	
Section 313 Toxic Chemical(s):		

Cyclohexane	CAS# 110-82-7	0.011094975%
n-Butyl acrylate	CAS# 141-32-2	0.00663%
Acrylic acid	CAS# 79-10-7	0.021165495%

### OSHA Hazard Communication Standard

(29 CFR 1910.1200):  Irritant  Unstable Reactive

### California Proposition 65

Products may contain trace levels of chemicals known to the State of California to cause cancer or reproductive harm. The estimated level of reported Prop 65 components is:

Methyl isobutyl ketone	CAS# 108-10-1	0.0000612%
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Toluene	CAS# 108-88-3	0.064693835%
Trimethylolpropane triacrylate	CAS# 15625-89-5	17.21988%
Methanol	CAS# 67-56-1	0.001989%
Bisphenol A	CAS# 80-05-7	0.00000102%

## International Regulations

Chemical Weapons Convention:	Covered products do not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.
Hazards to the Ozone Layer	Covered products do not contain substances identified as causing damage to the ozone layer, including CFC or HCFC. Reference the Montreal Protocol.
PFC (perfluorinated chemicals)	Covered products do not contain long -chain (PFCs).
R.E.A.C.H.:	Covered products do not contain reportable amounts (>0.1%) of any materials known on the REACH Authorization List (Annex XIV) or the REACH Restricted List (Annex XVII) of substances as issued by the European Chemical Agency (ECHA). Products manufactured in the EU comply with REACH Directive 1907/2006 EC.
RoHS (Restriction of Hazardous Substances):	Covered products allow for compliance with the current RoHS Directive restricting the use of certain hazardous substances in electrical and electronic equipment, medical devices and monitoring and control instruments, and certain cables. Products are well below the maximum concentration limits of lead (0.1%), mercury (0.1%), cadmium (0.01%), hexavalent chromium (0.1%), polybrominated biphenyls [PBB] (0.1%), polybrominated diphenyl ethers [PBDE] (0.1%) and listed phthalates.

## Canada Regulations

Workplace Hazardous Materials Information System:	(WHMIS Classification): This product is not WHMIS controlled.
Domestic Substances List (DSL):	Components are either exempt or listed on the DSL. Exceptions noted below.
Non-Domestic Substances List (NDSL):	Approximately 9% of product components are NDSL listed. This product contains components that are not DSL or NDSL listed, 0%.

## 16. OTHER INFORMATION

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<b>Prepared by:</b> Regulatory Affairs, R&D	

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