

SAFETY DATA SHEETS

This SDS packet was issued with item:

072343416

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070619650 070841916

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

070861211

Material Safety Data Sheet

Prelude Dual/Self-Cure Link

SECTION I: IDENTIFICATION

Company Name: Danville Materials
3420 Fostoria Way Suite A-200
San Ramon, CA 94583
Phone: (800) 827-7940
Fax: (925) 973-0764
Prepared: January 27, 2012

SECTION II : HAZARD(S) IDENTIFICATION

OSHA Permissible Exposure Limits: None
Other Exposure Limit Used: None
ACGIH Threshold Exposure Limit: None
Chronic, Other: None

SECTION II : COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component % by weight

Item	CAS#	OSHA PEL	ACGI- HTLV	%
EthylAlcohol	64-17-5	1000pm	1000pm	15-25
Ethanol	N/A	N/A	N/A	Trace
Alkyl Methacrylate	N/A	N/A	N/A	N/A
Resins				

SECTION IV : FIRST-AID MEASURES

Primary Routes of Exposure: Skin, ingestion
Signs of Exposure: Severe skin or eye irritation, redness or burning sensation.
Medical Conditions Generally Aggravated by Exposure: Allergies to methacrylates.
First Aid Procedures: For Skin - Wash off infected area with soap and water. For
Ingestion -Can cause depression of central nervous system, nausea, vomiting and diarrhea.

SECTION V: FIRE-FIGHTING MEASURES

Flash Point: 56OF ASTM D-56 (Tag closed cup)
Extinguishing Media: Carbon dioxide, foam, dry chemical
Special Fire Fighting Procedures: None
Flammable limits: In air, % by volume: Lower 3.3 Upper 19
Unusual Fire and Explosion Hazards: None

SECTION VI : ACCIDENTAL RELEASE MEASURES

None

SECTION VI : HANDLING AND STORAGE

Spill Management: Use absorbent to collect the material. Wash contaminated surfaces
with Soap and water

SECTION VI : EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory: None
Eye Protection: Safety goggles
Gloves: Surgical, rubber/PVC gloves
Other Clothing and Equipment: Face Mask
Ventilation: None required, local exhaust recommended

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: 44.6 mm HG @ 68 °F
Vapor Density: ND

Evaporation Rate: ND
Solubility in Water: Complete
Boiling Point: ND
Specific Gravity: >1
Appearance and Odor: Colorless liquid with alcoholic odor

SECTION X: STABILITY AND REACTIVITY

Stable (x) Unstable ()
Conditions to Avoid: Heat in excess of 40°C, direct sunlight or intense light.
Incompatibility: Strong oxidizing agents
Hazardous Decomposition Products: carbon dioxide
Hazardous Polymerization: May occur () Will not occur (x)

SECTION XI: TOXICOLOGICAL INFORMATION

Carcinogens: None known.

SECTION XII : ECOLOGICAL INFORMATION

This material contains hazardous components. Allow materials to cure prior to disposal.

SECTION XII : DISPOSAL CONSIDERATIONS

Dispose of safely in accordance with local, state, and federal regulations.

SECTION XIV : TRANSPORT INFORMATION

Regulated: DOT, IATA, IMO
Proper Shipping Name: Ethanol Solution
Hazard Class: 3
Identification #: UN 1170
Packing Group: II
Label: Flammable Liquid
Note see 49CFR 173.4

SECTION XV: REGULATORY INFORMATION

510k#: K040952

SECTION XVI : OTHER INFORMATION

None

The data and information given in this MSDS are accurate on the date of preparation. It does not indicate any warranty or representation. We disclaim all liability relating to use of this material since this is beyond our control.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 06.06.2015

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Prelude

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Prelude

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: 90989

Recommended uses of the product and restrictions on use:

Manufacturer Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Supplier Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Emergency telephone number:

ChemTrec Inc 1-800-424-9300,703-527-3887 (CHEMTREC)

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Irritant

Skin irritation, category 2
Eye irritation, category 2A
Skin sensitization, category 1



Flammable

Flammable liquids, category 2

Skin Irritation - Category 2.

Eye Irritation - Category 2.

Skin Sensitiser - Category 1.

Flammable Liquid - Category 2.

Signal word: Danger

Hazard statements:

Highly flammable liquid and vapor. Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Contaminated work clothing should not be allowed out of the workplace.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/light/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash skin thoroughly after handling.

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Avoid breathing dust/fume/gas/mist/vapors/spray. If eye irritation persists get medical advice/attention.

Eliminate all ignition sources if safe to do so.

IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or a rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

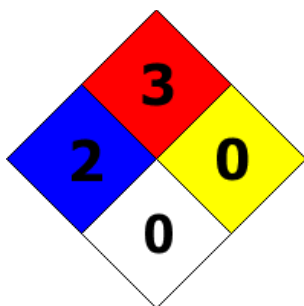
Continue rinsing. Store in a well ventilated place. Keep cool. Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	3
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 64-17-5	Ethyl alcohol	15-25 %
CAS N/A	Alkyl Methacrylate Resins	34-45 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear. Vapors may cause drowsiness and dizziness.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. May cause allergic reaction on contact with the skin. Avoid contact of uncured resin with skin, especially in people known to be allergic to methacrylates.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation,

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Prelude

discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Drink two glasses of water or milk. Seek medical attention if a substantial amount has been ingested.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath. Repeated exposure may cause skin dryness or cracking.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Dry chemical powder, foam or carbon dioxide.

For safety reasons unsuitable extinguishing agents: None identified. Water spray or jet may prove ineffective and/or may cause fire to spread.

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Dam spill and collect with sand, silicagel or other absorbent non-flammable material and place in suitable waste containers. Ventilate area of leak or spill.

Reference to other sections:

None

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Take precautions against static discharge.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame. Do not store in heat in excess of 40°C, direct sunlight or intense light.

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Prelude

SECTION 8 : Exposure controls/personal protection



Control Parameters:

64-17-5, Ethanol, ACGIH TLV: 1000 ppm STEL.
64-17-5, Ethanol, NIOSH: 3300 ppm IDLH (10% LEL).
64-17-5, Ethanol, OSHA PEL: 1000 ppm TWA; 1900 mg/m3 TWA.

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Pale pink liquid	Explosion limit lower: Explosion limit upper:	Not Determined Not Determined
Odor:	Fruity	Vapor pressure:	Not Determined
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	Not Determined	Relative density:	Not Determined
Melting/Freezing point:	Not Determined	Solubilities:	Miscible (for uncured material).
Boiling point/Boiling range:	Not Determined	Partition coefficient (n-octanol/water):	Not Determined
Flash point (closed cup):	18°C (64° F)	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Applicable	Decomposition temperature:	Not Determined

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Prelude

Flammability (solid,gaseous):	Highly flammable	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.

Chemical stability: Stable under normal conditions.

Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Heat in excess of 40°C, direct sunlight or intense light.

Incompatible materials: Strong acids, bases, and oxidizing agents.

Hazardous decomposition products: Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, hydrogen, and irritating gases.

SECTION 11 : Toxicological information

Acute Toxicity:		
Inhalation:	64-17-5	LC50 Rat 124.7 mg/L 4 h (Source: OECD_SIDS)
Oral:	64-17-5	LD50 Rat 7060 mg/kg (Source: NLM_CIP)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity

64-17-5: 96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through]

64-17-5: 48 Hr LC50 Eisenia foetida: 0.1 - 1 mg/cm2 [filter paper]

Persistence and degradability: Not determined.

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: None identified.

SECTION 13 : Disposal considerations

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Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1170

UN proper shipping name

Ethanol Mixture

Transport hazard class(es)



Class:

3 Flammable liquids

Packing group: II

Environmental hazard: None

Transport in bulk:

Special precautions for user: None

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

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Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

None

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

Effective date: 06.06.2015

Last updated: 06.17.2015

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Prelude

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Prelude

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: 90989

Recommended uses of the product and restrictions on use:

Manufacturer Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Supplier Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Emergency telephone number:

ChemTrec Inc 1-800-424-9300, 703-527-3887 (CHEMTREC)

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Irritant

Skin irritation, category 2
Eye irritation, category 2A
Skin sensitization, category 1



Flammable

Flammable liquids, category 2

Skin Irritation - Category 2.

Eye Irritation - Category 2.

Skin Sensitiser - Category 1.

Flammable Liquid - Category 2.

Signal word: Danger

Hazard statements:

Highly flammable liquid and vapor. Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Contaminated work clothing should not be allowed out of the workplace.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/light/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash skin thoroughly after handling.

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Avoid breathing dust/fume/gas/mist/vapors/spray. If eye irritation persists get medical advice/attention.

Eliminate all ignition sources if safe to do so.

IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or a rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

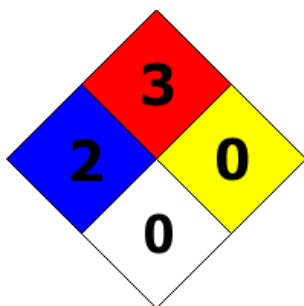
Continue rinsing. Store in a well ventilated place. Keep cool. Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	3
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 64-17-5	Ethyl alcohol	15-25 %
CAS N/A	Alkyl Methacrylate Resins	34-45 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear. Vapors may cause drowsiness and dizziness.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. May cause allergic reaction on contact with the skin. Avoid contact of uncured resin with skin, especially in people known to be allergic to methacrylates.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation,

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Prelude

discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Drink two glasses of water or milk. Seek medical attention if a substantial amount has been ingested.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath. Repeated exposure may cause skin dryness or cracking.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Dry chemical powder, foam or carbon dioxide.

For safety reasons unsuitable extinguishing agents: None identified. Water spray or jet may prove ineffective and/or may cause fire to spread.

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Dam spill and collect with sand, silicagel or other absorbent non-flammable material and place in suitable waste containers. Ventilate area of leak or spill.

Reference to other sections:

None

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Take precautions against static discharge.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame. Do not store in heat in excess of 40°C, direct sunlight or intense light.

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Prelude

SECTION 8 : Exposure controls/personal protection



Control Parameters:

64-17-5, Ethanol, ACGIH TLV: 1000 ppm STEL.
64-17-5, Ethanol, NIOSH: 3300 ppm IDLH (10% LEL).
64-17-5, Ethanol, OSHA PEL: 1000 ppm TWA; 1900 mg/m3 TWA.

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Pale pink liquid	Explosion limit lower: Explosion limit upper:	Not Determined Not Determined
Odor:	Fruity	Vapor pressure:	Not Determined
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	Not Determined	Relative density:	Not Determined
Melting/Freezing point:	Not Determined	Solubilities:	Miscible (for uncured material).
Boiling point/Boiling range:	Not Determined	Partition coefficient (n-octanol/water):	Not Determined
Flash point (closed cup):	18°C (64° F)	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Applicable	Decomposition temperature:	Not Determined

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Prelude

Flammability (solid,gaseous):	Highly flammable	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.

Chemical stability: Stable under normal conditions.

Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Heat in excess of 40°C, direct sunlight or intense light.

Incompatible materials: Strong acids, bases, and oxidizing agents.

Hazardous decomposition products: Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, hydrogen, and irritating gases.

SECTION 11 : Toxicological information

Acute Toxicity:		
Inhalation:	64-17-5	LC50 Rat 124.7 mg/L 4 h (Source: OECD_SIDS)
Oral:	64-17-5	LD50 Rat 7060 mg/kg (Source: NLM_CIP)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:	No additional information.	
Single Target Organ (STOT):	No additional information.	
Numerical Measures:	No additional information.	
Carcinogenicity:	No additional information.	
Mutagenicity:	No additional information.	
Reproductive Toxicity:	No additional information.	

SECTION 12 : Ecological information

Ecotoxicity

64-17-5: 96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through]

64-17-5: 48 Hr LC50 Eisenia foetida: 0.1 - 1 mg/cm2 [filter paper]

Persistence and degradability: Not determined.

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: None identified.

SECTION 13 : Disposal considerations

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Prelude

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1170

UN proper shipping name

Ethanol Mixture

Transport hazard class(es)



Class:

3 Flammable liquids

Packing group: II

Environmental hazard: None

Transport in bulk:

Special precautions for user: None

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

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Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

None

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

Effective date: 06.06.2015

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Prelude

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Prelude

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: 90989

Recommended uses of the product and restrictions on use:

Manufacturer Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Supplier Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Emergency telephone number:

ChemTrec Inc 1-800-424-9300,703-527-3887 (CHEMTREC)

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Irritant

Skin irritation, category 2
Eye irritation, category 2A
Skin sensitization, category 1



Flammable

Flammable liquids, category 2

Skin Irritation - Category 2.

Eye Irritation - Category 2.

Skin Sensitiser - Category 1.

Flammable Liquid - Category 2.

Signal word: Danger

Hazard statements:

Highly flammable liquid and vapor. Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Contaminated work clothing should not be allowed out of the workplace.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/light/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash skin thoroughly after handling.

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Prelude

Avoid breathing dust/fume/gas/mist/vapors/spray. If eye irritation persists get medical advice/attention.

Eliminate all ignition sources if safe to do so.

IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or a rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

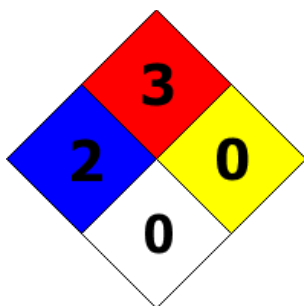
Continue rinsing. Store in a well ventilated place. Keep cool. Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	3
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 64-17-5	Ethyl alcohol	15-25 %
CAS N/A	Alkyl Methacrylate Resins	34-45 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear. Vapors may cause drowsiness and dizziness.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. May cause allergic reaction on contact with the skin. Avoid contact of uncured resin with skin, especially in people known to be allergic to methacrylates.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation,

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Prelude

discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Drink two glasses of water or milk. Seek medical attention if a substantial amount has been ingested.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath. Repeated exposure may cause skin dryness or cracking.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Dry chemical powder, foam or carbon dioxide.

For safety reasons unsuitable extinguishing agents: None identified. Water spray or jet may prove ineffective and/or may cause fire to spread.

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Dam spill and collect with sand, silicagel or other absorbent non-flammable material and place in suitable waste containers. Ventilate area of leak or spill.

Reference to other sections:

None

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Take precautions against static discharge.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame. Do not store in heat in excess of 40°C, direct sunlight or intense light.

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Prelude

SECTION 8 : Exposure controls/personal protection



Control Parameters:

64-17-5, Ethanol, ACGIH TLV: 1000 ppm STEL.
64-17-5, Ethanol, NIOSH: 3300 ppm IDLH (10% LEL).
64-17-5, Ethanol, OSHA PEL: 1000 ppm TWA; 1900 mg/m3 TWA.

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Pale pink liquid	Explosion limit lower: Explosion limit upper:	Not Determined Not Determined
Odor:	Fruity	Vapor pressure:	Not Determined
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	Not Determined	Relative density:	Not Determined
Melting/Freezing point:	Not Determined	Solubilities:	Miscible (for uncured material).
Boiling point/Boiling range:	Not Determined	Partition coefficient (n-octanol/water):	Not Determined
Flash point (closed cup):	18°C (64° F)	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Applicable	Decomposition temperature:	Not Determined

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Prelude

Flammability (solid,gaseous):	Highly flammable	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.

Chemical stability: Stable under normal conditions.

Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Heat in excess of 40°C, direct sunlight or intense light.

Incompatible materials: Strong acids, bases, and oxidizing agents.

Hazardous decomposition products: Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, hydrogen, and irritating gases.

SECTION 11 : Toxicological information

Acute Toxicity:		
Inhalation:	64-17-5	LC50 Rat 124.7 mg/L 4 h (Source: OECD_SIDS)
Oral:	64-17-5	LD50 Rat 7060 mg/kg (Source: NLM_CIP)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity

64-17-5: 96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through]

64-17-5: 48 Hr LC50 Eisenia foetida: 0.1 - 1 mg/cm2 [filter paper]

Persistence and degradability: Not determined.

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: None identified.

SECTION 13 : Disposal considerations

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Prelude

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1170

UN proper shipping name

Ethanol Mixture

Transport hazard class(es)



Class:

3 Flammable liquids

Packing group: II

Environmental hazard: None

Transport in bulk:

Special precautions for user: None

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

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Prelude

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

None

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

Effective date: 06.06.2015

Last updated: 06.17.2015

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Effective date : 06.08.2015

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Prelude One

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Prelude One

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: Prelude One

Recommended uses of the product and restrictions on use:

Manufacturer Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Supplier Details:

Danville Materials
3420 Fostoria Way Suite a200
San Ramon, CA 94583

Emergency telephone number:

Chemtrec 1-800-424-9300

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Irritant

Skin irritation, category 2
Eye irritation, category 2A
Skin sensitization, category 1



Flammable

Flammable liquids, category 2

Skin Irritation - Category 2.

Eye Irritation - Category 2.

Skin Sensitiser - Category 1.

Flammable Liquid - Category 2.

Signal word: Danger

Hazard statements:

Highly flammable liquid and vapor. Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Contaminated work clothing should not be allowed out of the workplace.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/light/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash skin thoroughly after handling.

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Prelude One

Avoid breathing dust/fume/gas/mist/vapors/spray. If eye irritation persists get medical advice/attention.

Eliminate all ignition sources if safe to do so.

IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or a rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

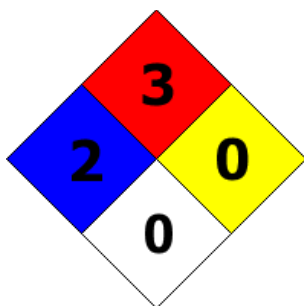
Continue rinsing. Store in a well ventilated place. Keep cool. Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	3
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 64-17-5	Ethyl alcohol	30-50 %
CAS 1565-94-2	Bisphenol A glycidyl methacrylate	20-40 %
CAS 868-77-9	2-Hydroxyethyl methacrylate	10-20 %
CAS N/A	Methacryloyloxyalkyl acid phosphate	1-5 %
CAS N/A	Methacryloyloxyalkyl acid carboxylate	1-5 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear. Vapors may cause drowsiness and dizziness.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. May cause allergic reaction on contact with the skin. Avoid contact of uncured resin with skin, especially in people known to be allergic to methacrylates.

Created by Global Safety Management, 1-813-435-5161 - www.GSMSDS.com

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Prelude One

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Drink two glasses of water or milk. Seek medical attention if a substantial amount has been ingested.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath. Repeated exposure may cause skin dryness or cracking.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Dry chemical powder, foam or carbon dioxide.

For safety reasons unsuitable extinguishing agents: None identified. Water spray or jet may prove ineffective and/or may cause fire to spread.

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Dam spill and collect with sand, silicagel or other absorbent non-flammable material and place in suitable waste containers. Ventilate area of leak or spill.

Reference to other sections:

None

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Take precautions against static discharge.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage.

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Prelude One

Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame. Avoid high light intensity ambient light (>10000 lux).

SECTION 8 : Exposure controls/personal protection



Control Parameters:

64-17-5, Ethanol, ACGIH TLV: 1000 ppm STEL.
64-17-5, Ethanol, NIOSH: 3300 ppm IDLH (10% LEL).
64-17-5, Ethanol, OSHA PEL: 1000 ppm TWA; 1900 mg/m3 TWA.

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Slightly yellow liquid	Explosion limit lower: Explosion limit upper:	3.5% 15.0%
Odor:	Ethanol-Like	Vapor pressure:	Not Determined
Odor threshold:	Not Determined	Vapor density:	1.6g/cm3
pH-value:	2.8	Relative density:	0.8g/cm3
Melting/Freezing point:	-114.5°C	Solubilities:	Miscible in water.
Boiling point/Boiling range:	78°C	Partition coefficient (n-octanol/water):	Not Determined
Flash point (closed cup):	13°C	Auto/Self-ignition temperature:	425°C

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Prelude One

Evaporation rate:	Not Applicable	Decomposition temperature:	Not Determined
Flammability (solid,gaseous):	Highly flammable	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.

Chemical stability: Stable under normal conditions.

Possible hazardous reactions: None under normal processing.

Conditions to avoid: Incompatible materials. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid high light intensity ambient light (>10000 lux).

Incompatible materials: Strong acids, bases, and oxidizing agents.

Hazardous decomposition products: Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, hydrogen, and irritating gases.

SECTION 11 : Toxicological information

Acute Toxicity:		
Inhalation:	64-17-5	LC50 Rat 124.7 mg/L 4 h (Source: OECD_SIDS)
Oral:	64-17-5	LD50 Rat 7060 mg/kg (Source: NLM_CIP)
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.
Mutagenicity:		No additional information.
Reproductive Toxicity:		No additional information.

SECTION 12 : Ecological information

Ecotoxicity

64-17-5: 96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through]

64-17-5: 48 Hr LC50 Eisenia foetida: 0.1 - 1 mg/cm2 [filter paper]

Persistence and degradability: Not determined.

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: None identified.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

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SECTION 13 : Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1170

UN proper shipping name

Ethanol Mixture

Transport hazard class(es)



Class:

3 Flammable liquids

Packing group: II

Environmental hazard: None

Transport in bulk:

Special precautions for user: None

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

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None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

None

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

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Last updated: 06.12.2015