

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **Quick Film**

Product Description • Red film

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Photostencil film

1.3 Details of the supplier of the safety data sheet

Manufacturer • IKONICS Corporation
4832 Grand Ave.
Duluth, MN 55807
United States
www.ikonics.com
sds@ikonics.com

Telephone (General) • (218) 628-2217

Telephone (General) • (800) 328-4261 - Toll free

1.4 Emergency telephone number

Chemtrec • 1-800-424-9300 - Within USA and Canada
• +1 703-527-3887 - Outside USA and Canada (collect calls accepted)

Section 2: Hazards Identification

UN GHS

According to Third Revised Edition

2.1 Classification of the substance or mixture

UN GHS • Skin Irritation 2 - H315
Skin Sensitization 1 - H317
Eye Irritation 2 - H319
Hazardous to the aquatic environment Chronic 3 - H412

2.2 Label elements

UN GHS

WARNING



Hazard statements • H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention • P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.
P264 - Wash thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

- Response**
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P321 - Specific treatment, see supplemental first aid information.
 - P362 - Take off contaminated clothing and wash before reuse.

- Storage/Disposal**
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS • No data available

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Skin Irritation 2 - H315
- Skin Sensitization 1 - H317
- Eye Irritation 2 - H319

2.2 Label elements

OSHA HCS 2012

WARNING



- Hazard statements**
- Causes skin irritation - H315
 - May cause an allergic skin reaction - H317
 - Causes serious eye irritation - H319

Precautionary statements

- Prevention**
- Avoid breathing dust/fume/gas/mist/vapors/spray. - P261
 - Wash thoroughly after handling. - P264
 - Contaminated work clothing should not be allowed out of the workplace. - P272
 - Avoid release to the environment. - P273
 - Wear protective gloves/protective clothing/eye protection/face protection. - P280

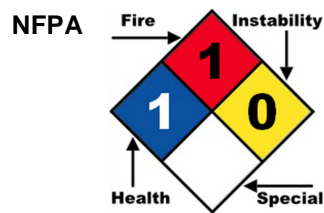
- Response**
- IF ON SKIN: Wash with plenty of soap and water. - P302+P352
 - If skin irritation or rash occurs: Get medical advice/attention. - P333+P313
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
 - If eye irritation persists: Get medical advice/attention. - P337+P313
 - Specific treatment, see supplemental first aid information. - P321
 - Take off contaminated clothing and wash before reuse. - P362

- Storage/Disposal**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012 • No data available

2.4 Other information



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

3.2 Mixtures

| Composition | | | | | |
|---|--|--------------|---|---|----------|
| Chemical Name | Identifiers | % | LD50/LC50 | Classifications According to Regulation/Directive | Comments |
| Alkoxylated nonylphenol acrylate | | 5% TO 8% | | UN GHS: Skin Irrit. 2; Skin Sens. 1 OSHA HCS 2012: Skin Irrit. 2; Skin Sens. 1 | NDA |
| Pentaerythritol Tetraacrylate | CAS: 4986-89-4 EC Number: 225-644-1 EU Index: 607-122-00-9 EINECS: 225-644-1 | 3% TO 5% | | UN GHS: Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1 OSHA HCS 2012: Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1 | NDA |
| Acrylic acid, triester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol | CAS: 15625-89-5 EC Number: 239-701-3 EU Index: 607-111-00-9 EINECS: 239-701-3 | 1% TO 2% | Ingestion/Oral-Rat LD50 • 5190 µL/kg Skin-Rabbit LD50 • 5170 mg/kg | UN GHS: Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1 OSHA HCS 2012: Eye Irrit. 2A; Skin Irrit. 2; Skin Sens. 1 | NDA |
| 2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester | CAS: 3524-68-3 EC Number: 222-540-8 EU Index: 607-110-00-3 EINECS: 222-540-8 | 1% TO 1.3% | Ingestion/Oral-Rat LD50 • 1830 mg/kg Skin-Rabbit LD50 • 4 mL/kg | UN GHS: Skin Irrit. 2; Skin Sens. 1 OSHA HCS 2012: Skin Irrit. 2; Skin Sens. 1 | NDA |
| Benzophenone | CAS: 119-61-9 EINECS: 204-337-6 | 0.3% TO 0.5% | Ingestion/Oral-Rat LD50 • >10 g/kg Skin-Rabbit LD50 • 3535 mg/kg | UN GHS: Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit. 2A; Skin Irrit. 3 OSHA HCS 2012: Eye Irrit. 2A; Skin Irrit. 3 | NDA |

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration and call 911 or emergency medical service.

Skin

- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

- Ingestion**
- If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- No data available

4.3 Indication of any immediate medical attention and special treatment needed

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
 - LARGE FIRE: Water spray, fog or regular foam.

- Unsuitable Extinguishing Media**
- No data available

- Firefighting Procedures**
- LARGE FIRES: Use extinguishing agent suitable for type of surrounding fire. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep unauthorized personnel away. Ventilate closed spaces before entering.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Some of these materials may burn, but none ignite readily.

- Hazardous Combustion Products**
- Products of combustion include: carbon oxides (CO_x), nitrogen oxides (NO_x).

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- No special precautions expected to be necessary if material is used under ordinary conditions and as recommended.
- Emergency Procedures**
- No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

6.2 Environmental precautions

- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- No special precautions or procedures are necessary.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

- Handling**
- Handle and store under yellow lights to prevent exposure to UV radiation. Use good

safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry place.

Special Packaging Materials

- Package in opaque containers and/or use additional light-blocking materials.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

8.2 Exposure controls

Engineering Measures/Controls

- Local exhaust is recommended but not required. Provide adequate ventilation as necessary.

Personal Protective Equipment

Pictograms



Respiratory

- Do not breathe vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Hands

- Wear protective gloves - rubber or neoprene.

Skin/Body

- Wear protective clothing - apron or other impervious body coverings.

General Industrial Hygiene Considerations

- Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

- No data available

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

| Material Description | | | |
|-----------------------------------|-------------------|-------------------------------------|-------------------|
| Physical Form | Solid | Appearance/Description | Film |
| Color | Red | Odor | Not relevant |
| Taste | Not relevant | Odor Threshold | Not relevant |
| Physical and Chemical Properties | Not relevant | | |
| General Properties | | | |
| Boiling Point | Not relevant | Melting Point | No data available |
| Decomposition Temperature | Not relevant | pH | Not relevant |
| Specific Gravity/Relative Density | Not relevant | Density | No data available |
| Water Solubility | Soluble | Viscosity | Not relevant |
| Explosive Properties | Not relevant | Oxidizing Properties: | Not relevant |
| Volatility | | | |
| Vapor Pressure | Not relevant | Vapor Density | Not relevant |
| Evaporation Rate | Not relevant | | |
| Flammability | | | |
| Flash Point | Not relevant | UEL | Not relevant |
| LEL | Not relevant | Autoignition | Not relevant |
| Flammability (solid, gas) | Not relevant | | |
| Environmental | | | |
| Half-Life | No data available | Octanol/Water Partition coefficient | No data available |

| | | | |
|------------------------------------|-------------------|-------------------------|-------------------|
| Bioaccumulation Factor | No data available | Bioconcentration Factor | No data available |
| Biochemical Oxygen Demand BOD/BOD5 | No data available | Chemical Oxygen Demand | No data available |
| Persistence | No data available | Degradation | No data available |

9.2 Other Information

- No data available

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- UV reactive.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Excess heat. Strong light.

10.5 Incompatible materials

- No data available

10.6 Hazardous decomposition products

- Hazardous decomposition products formed under fire conditions - carbon oxides, nitrogen oxides.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

| Components | | |
|--|------------|---|
| Acrylic acid, triester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (1% TO 2%) | 15625-89-5 | Acute Toxicity: Ingestion/Oral-Rat LD50 • 5190 µL/kg; Skin-Rabbit LD50 • 5170 mg/kg; Irritation: Eye-Rabbit • 100 mg • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation |
| 2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester (0.6% TO 1.2%) | 3524-68-3 | Acute Toxicity: Ingestion/Oral-Rat LD50 • 1830 mg/kg; <i>Gastrointestinal:Ulceration or bleeding from small intestine; Gastrointestinal:Ulceration or bleeding from large intestine; Gastrointestinal:Other changes;</i> Skin-Rabbit LD50 • 4 mL/kg; Irritation: Eye-Rabbit • 1 mg • Severe irritation; Skin-Rabbit • 500 mg • Moderate irritation |
| Benzophenone (0.3% TO 0.5%) | 119-61-9 | Acute Toxicity: Ingestion/Oral-Rat LD50 • >10 g/kg; Skin-Rabbit LD50 • 3535 mg/kg |

| GHS Properties | Classification |
|---------------------------|---|
| Acute toxicity | OSHA HCS 2012• UN GHS• |
| Aspiration Hazard | OSHA HCS 2012• UN GHS• |
| Carcinogenicity | OSHA HCS 2012• UN GHS• |
| Germ Cell Mutagenicity | OSHA HCS 2012• UN GHS• |
| Skin corrosion/Irritation | OSHA HCS 2012•Skin Irritation 2 UN GHS•Skin Irritation 2 |
| Skin sensitization | OSHA HCS 2012•Skin Sensitizer 1 UN GHS•Skin Sensitizer 1 |

| | |
|-------------------------------|---|
| STOT-RE | OSHA HCS 2012• UN GHS• |
| STOT-SE | OSHA HCS 2012• UN GHS• |
| Toxicity for Reproduction | OSHA HCS 2012• UN GHS• |
| Respiratory sensitization | OSHA HCS 2012• UN GHS• |
| Serious eye damage/Irritation | OSHA HCS 2012•Eye Irritation 2 UN GHS•Eye Irritation 2 |

Route(s) of entry/exposure • Skin, Eye

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause irritation.

Chronic (Delayed)

- Repeated and prolonged exposure may cause irritation.

Skin

Acute (Immediate)

- Causes skin irritation. May cause an allergic skin reaction.

Chronic (Delayed)

- Repeated and prolonged exposure may cause sensitization.

Eye

Acute (Immediate)

- Causes eye irritation.

Chronic (Delayed)

- Repeated and prolonged exposure may cause irritation.

Ingestion

Acute (Immediate)

- May cause irritation.

Chronic (Delayed)

- No specific information available.

Section 12 - Ecological Information

12.1 Toxicity

| Component | CAS | Data | Comments |
|-----------------------------|----------|---|----------|
| Benzophenone (0.3% TO 0.5%) | 119-61-9 | Crustacea: 24 Hour(s) EC50 Crustacea .28 mg/L ; Fish: 96 Hour(s) LC50 Fish 14.2 mg/L | |

12.2 Persistence and degradability

- No data available

12.3 Bioaccumulative potential

- No data available

12.4 Mobility in Soil

- No data available

12.5 Results of PBT and vPvB assessment

- No data available

12.6 Other adverse effects

Potential Environmental Effects

- May cause long lasting harmful effects to aquatic life.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of container in accordance with local, regional, national, and/or international regulations.

13.2 Other Information

- Avoid release to the environment. Dispose of wastes in an approved waste disposal facility.

Section 14 - Transport Information

| | 14.1 UN number | 14.2 UN proper shipping name | 14.3 Transport hazard class(es) | 14.4 Packing group | 14.5 Environmental hazards |
|-----------|----------------|------------------------------|---------------------------------|--------------------|----------------------------|
| DOT | NDA | NDA | NDA | NDA | NDA |
| IMO/IMDG | NDA | NDA | NDA | NDA | NDA |
| IATA/ICAO | NDA | NDA | NDA | NDA | NDA |

14.6 Special precautions for user

- No special precautions.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not relevant.

14.8 Other information

- DOT • Not regulated.
 IMO/IMDG • Not regulated.
 IATA/ICAO • Not regulated.

Section 15 - Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****SARA Hazard Classifications** • Acute

| Inventory | | |
|---|------------|------|
| Component | CAS | TSCA |
| 2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester | 3524-68-3 | Yes |
| Acrylic acid, triester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol | 15625-89-5 | Yes |
| Benzophenone | 119-61-9 | Yes |
| Pentaerythritol Tetraacrylate | 4986-89-4 | Yes |

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

- | | | |
|--|------------|----------------------------------|
| •Acrylic acid, triester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol | 15625-89-5 | Not Listed |
| •2-Propenoic acid, 2-(hydroxymethyl)-2-(((1-oxo-2-propenyl)oxy)methyl)-1,3-propanediyl ester | 3524-68-3 | Not Listed |
| •Pentaerythritol Tetraacrylate | 4986-89-4 | Not Listed |
| •Benzophenone | 119-61-9 | carcinogen, initial date 6/22/12 |

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- California Proposition 65: This product contains or may contain a substance(s) known to the State of California to cause cancer and/or reproductive toxicity:
 Benzophenone CAS #119-61-9 0.3-0.5%

Section 16 - Other Information

Relevant Phrases (code & full text)

- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H412 - Harmful to aquatic life with long lasting effects
- P261 - Avoid breathing dust, fume, gas, mist, vapors and/or spray.
- P264 - Wash thoroughly after handling.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 - Specific treatment, see supplemental first aid information.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P362 - Take off contaminated clothing and wash before reuse.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Classification method for mixtures

- Calculation method.

Last Revision Date

- N/A

Preparation Date

- 25 August 2016

Other Information

- Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.

Disclaimer/Statement of Liability

- The information contained herein is based on data available to us and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under direct supervision, no representation is made that the information is accurate, reliable, complete, or representative and Buyer may rely thereon only at the Buyer's risk. We make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and / or situations involving its handling and uses. No warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.
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