

# Safety Data Sheet

Revision: 26 February 2024  
Supersedes: 29 March 2023

# IKONICS®

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

### 1.1 Product identifier

**Product Name:** Super PHAT films

**UFI Number:** XP01-Q064-200X-R9U3

**Product Description:** Translucent film

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

**Relevant identified use(s):** Screen printing stencil film

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer** IKONICS  
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

EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 2020/878]

### 2.1 Classification of the substance or mixture

CLP

Hazard Class	Category	Code
Skin Sensitization	1	H317
Eye Damage	1	H318
Carcinogenicity	1A	H350
Hazardous to the Aquatic Environment, Chronic	3	H412

### 2.2 Label Elements

CLP

**DANGER**



Hazard Statement	Code
May cause an allergic skin reaction	H317
Causes serious eye damage	H318
May cause cancer	H350
Harmful to aquatic life with long lasting effects	H412
Contains sensitizing substance (Pentaerythritol Triacrylate; Pentaerythritol Tetraacrylate). May produce an allergic reaction.	EUH208

### Precautionary Measures

Category	Code	Statement
<b>Prevention</b>	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	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.
<b>Response</b>	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+P354+P338+P317	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P318	If exposed or concerned, get medical advice.
	P362+P364	Take off contaminated clothing and wash it before reuse.

<b>Storage</b>	P405	Store locked up.
<b>Disposal</b>	P501	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## 2.3 Other Hazards

### CLP

This mixture does not meet the criteria for persistent, bioaccumulative and toxic or very persistent and very bioaccumulative in accordance with REACH Annex XIII.

### Endocrine Disrupting Properties

**Human Health:** This mixture does not contain components having endocrine disrupting properties in accordance with REACH Article 59(1), Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/603 at a concentration equal to or greater than 0.1% by weight.

**Environment:** This mixture does not contain components having endocrine disrupting properties in accordance with REACH Article 59(1), Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/603 at a concentration equal to or greater than 0.1% by weight.

## UN GHS

According to UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Eighth Revised Edition

### 2.1 Classification of the substance or mixture

#### UN GHS

Hazard Class	Category	Code
Skin Sensitization	1	H317
Eye Damage	1	H318
Carcinogenicity	1A	H350
Hazardous to the Aquatic Environment, Acute	3	H402
Hazardous to the Aquatic Environment, Chronic	3	H412

### 2.2 Label Elements

#### UN GHS

**DANGER**



Hazard Statement	Code
May cause an allergic skin reaction	H317
Causes serious eye damage	H318
May cause cancer	H350
Harmful to aquatic life with long lasting effects	H412

#### Precautionary Measures

Category	Code	Statement
<b>Prevention</b>	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	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.
<b>Response</b>	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+P354+P338+P317	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P318	If exposed or concerned, get medical advice.
	P362+P364	Take off contaminated clothing and wash it before reuse.
<b>Storage</b>	P405	Store locked up.
<b>Disposal</b>	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

Hazard Class	Category	Code
Skin Sensitization	1	H317
Eye Damage	1	H318

Carcinogenicity	1A	H350
-----------------	----	------

**2.2 Label Elements**  
OSHA HCS 2012

**DANGER**



Hazard Statement	Code
May cause an allergic skin reaction	H317
Causes serious eye damage	H318
May cause cancer	H350

**Precautionary Measures**

Category	Code	Statement
<b>Prevention</b>	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	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+P354+P338+P317	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P318	If exposed or concerned, get medical advice.
P362+P364	Take off contaminated clothing and wash it before reuse.	
<b>Storage</b>	P405	Store locked up.
<b>Disposal</b>	P501	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**2.3 Other hazards**

OSHA HCS 2012 No data available

**Canada**

**According to WHMIS 2015**

**2.1 Classification of the substance or mixture**

**WHMIS 2015**

Hazard Class	Category	Code
Skin Sensitization	1	H317
Eye Damage	1	H318
Carcinogenicity	1A	H350

**2.2 Label Elements**

**WHMIS 2015**

**DANGER**



Hazard Statement	Code
May cause an allergic skin reaction	H317
Causes serious eye damage	H318
May cause cancer	H350

**Precautionary Measures**

Category	Code	Statement
<b>Prevention</b>	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	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+P354+P338+P317	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P318	If exposed or concerned, get medical advice.
P362+P364	Take off contaminated clothing and wash it before reuse.	

<b>Storage</b>	P405	Store locked up.
<b>Disposal</b>	P501	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### 2.3 Other hazards

**WHMIS 2015** No data available

### 2.4 Other information

#### NFPA



## Section 3 - Composition/Information on Ingredients

### 3.1 Substances

### 3.2 Mixtures

Chemical Name	CAS number	%	LD50/LC50	Classifications According to Regulation/Directive
Aromatic urethane acrylate	Not available	4-10%		<b>GHS / CLP / OSHA / WHMIS:</b> Skin Irrit. 2; Skin Sens. 1 ; Eye Irrit. 2
Polyethylene glycol diacrylate	26570-48-9	3-10%		<b>GHS / CLP / OSHA / WHMIS:</b> Skin Irrit. 2; Skin Sens. 1 ; Eye Dam. 1
2-Hydroxy-3-phenoxypropyl acrylate	16969-10-1	3-9%		<b>GHS / CLP:</b> Skin Sens. 1; Eye Dam. 1; Aquatic Chronic 2 <b>OSHA / WHMIS:</b> Skin Sens. 1; Eye Dam. 1
Tripropylene glycol diacrylate	42978-66-5	1-3%	Ingestion/Oral-Rat LD50 >2000 mg/kg; Skin-Rabbit LD50 >2000 mg/kg	<b>GHS / CLP:</b> Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 2 <b>OSHA / WHMIS:</b> Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2; STOT SE 3
Benzophenone	119-61-9	0.5-2.5%	Ingestion/Oral-Rat LD50 >10 g/kg; Skin-Rabbit LD50 3535 mg/kg	<b>GHS / CLP:</b> STOT-RE 2; Aquatic Chronic 3 <b>OSHA / WHMIS:</b> STOT-RE 2
2-Phenoxyethyl acrylate	48145-04-6	0.15-0.45%	Ingestion/Oral-Rat LD50 5145 mg/kg	<b>GHS / CLP:</b> Skin Sens. 1; Repr. 2; Aquatic Chronic 2 <b>OSHA / WHMIS:</b> Skin Sens. 1; Repr. 2
2-Isopropylthioxanthone	5495-84-1	0.15-0.45%		<b>GHS / CLP:</b> Repr. 2; Aquatic Acute 1; Aquatic Chronic 1; M-Factor = 1 <b>OSHA / WHMIS:</b> Repr. 2

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

**Inhalation.** 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.** Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

**Eye.** 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. If large quantities are swallowed, call a physician immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 – Toxicological Information

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable extinguishing media.** SMALL FIRES: Dry chemical, CO<sub>2</sub>, water spray or regular foam. LARGE FIRE: Water spray, fog or regular foam.

**Unsuitable extinguishing media.** No data available

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

### 5.2 Special hazards arising from the substance or mixture

**Unusual fire and explosion hazards.** Material may burn, but does not ignite readily.

**Hazardous combustion products.** Products of combustion include: carbon oxides (CO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>).

### 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.** Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Emergency procedures.** No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

### 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.** Use appropriate Personal Protective Equipment (PPE). Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container.

### 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

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

Store in a cool, dry place. 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

None specified

### 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. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

**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	Translucent film
Color	White to amber	Odor	Not relevant
General Properties			
Boiling Point	Not relevant	Melting/Freezing Point	No data available
Decomposition Temperature	Not relevant	pH	Not relevant
Density	Not relevant	Water Solubility	Soluble
Viscosity	Not relevant	Kinematic Viscosity	Not relevant
Explosive Properties	Not relevant	Oxidizing Properties	Not relevant
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant	VOC (Wt.)	Not relevant
Volatiles (Wt.)	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant

Flammability (solid, gas)	Not relevant		
<b>Environmental</b>			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	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.** Stable

**10.3 Possibility of hazardous reactions.** Hazardous polymerization will not occur.

**10.4 Conditions to avoid.** Direct sunlight. Excess heat. Avoid freezing.

**10.5 Incompatible materials.** No data available.

**10.6 Hazardous decomposition products.** Hazardous decomposition products formed under fire conditions - carbon oxides (COx), nitrogen oxides (NOx). No decomposition is expected under normal storage and use conditions.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Hazard	Hazard Classification
Acute toxicity	Based on available data, the classification criteria are not met
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Eye Damage 1
Respiratory/skin sensitization	Skin Sensitization 1
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Carcinogenicity 1B
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-Single Exposure	Based on available data, the classification criteria are not met
STOT-Repeated Exposure	Based on available data, the classification criteria are not met
Aspiration	Based on available data, the classification criteria are not met

Route(s) of entry/exposure: Skin, eye, ingestion

### Potential Health Effects

#### Inhalation

**Acute (Immediate):** No specific information available.

**Chronic (Delayed):** Repeated and prolonged exposure may cause irritation.

#### Skin

**Acute (Immediate):** May cause irritation. May cause an allergic skin reaction.

**Chronic (Delayed):** Repeated and prolonged exposure may cause sensitization.

#### Eye

**Acute (Immediate):** May cause serious eye irritation or damage.

**Chronic (Delayed):** Repeated and prolonged exposure may cause eye damage.

#### Ingestion

**Acute (Immediate):** May cause mild irritation.

**Chronic (Delayed):** Repeated and prolonged exposure may cause irritation.

## Section 12 - Ecological Information

### 12.1 Toxicity

#### Polyethylene glycol diacrylate CAS #26570-48-9

Toxicity to daphnia EC50 - Daphnia magna (Water flea) – 19.3 mg/l - 48 h

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (algae) - 3.6 mg/l

#### 2-Hydroxy-3-phenoxypropyl acrylate CAS #16969-10-1

Toxicity to daphnia EC50 - Daphnia magna (Water flea) – 19.5 mg/l - 48 h

Toxicity to algae ErC50 - Desmodesmus subspicatus (green algae) - 4.1 mg/l - 96 h

#### Tripropylene glycol diacrylate CAS #42978-66-5

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - > 4.6 - < 10 mg/l - 96 h

Toxicity to daphnia EC50 - Daphnia magna Straus (Water flea) - 89 mg/l - 48 h

Toxicity to algae ErC50 - Desmodesmus subspicatus (green algae) - 65.9 mg/l - 72 h

#### Benzophenone CAS #119-61-9

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 14.2 mg/l - 96.0 h

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 6.78 mg/l - 48 h

Toxicity to algae ErC50 - Pseudokirchneriella subcapitata (green algae) - 3.5 mg/l - 72 h

**2-Isopropylthioxanthone CAS #5495-84-1**

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - >0.028 mg/l - 48 h  
 Toxicity to algae ErC50 - Desmodemus subspicatus (green algae) - >0.047 mg/l - 72 h

**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**On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.**12.6 Endocrine disrupting properties**

No endocrine disrupting components identified

**12.7 Other adverse 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.** None specified.**14.7 Transport in bulk according to IMO instruments.** 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**REACH compliance.** No components at a concentration of 0.1% w/w or above are included in the Authorization List or the Candidate List of Substances of Very High Concern for Authorization.**15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**15.3 Other information****California Proposition 65:** This product can expose you to chemicals known to the State of California to cause cancer:

Benzophenone CAS #119-61-9 0.5-2.5%

**Section 16 - Other Information****Relevant phrases (code & full text)**

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H350 - May cause cancer

H412 - Harmful to aquatic life with long lasting effects

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

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+P317 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.

P310 - Immediately call a POISON CENTER or doctor/physician.

P318 - If exposed or concerned, get medical advice.

P319 - Get medical help if you feel unwell.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P405 - Store locked up.

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:** 29 March 2023

**Preparation date:** 26 February 2024

**Changes to the current revision:** Added EU UFI number in Section 1.1. Updated Section 2 hazard classifications and precautionary phrases. Added ecological toxicity data in section 12.1.

**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.

---