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

1.1 Product identifier
Product Name: Super PHAT films
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 Irritation	2	H315
Skin Sensitization	1	H317
Eye Damage	1	H318
Hazardous to the Aquatic Environment, Chronic	3	H412

2.2 Label Elements
CLP

DANGER

Hazard Statement	Code
Causes skin irritation	H315
May cause an allergic skin reaction	H317
Causes serious eye damage	H318
Harmful to aquatic life with long lasting effects	H412
Contains sensitizing substances (Aromatic urethane acrylate; Polyethylene glycol diacrylate; 2-Hydroxy-3-phenoxypropyl acrylate; Tripropylene glycol diacrylate; Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate; 2-Phenoxyethyl acrylate; Phenyl bis(2,4,6-trimethylbenzoyl)phosphine oxide). May produce an allergic reaction.	EUH208

Precautionary Measures

Category	Code	Statement
Prevention	P261	Avoid breathing dust/fume/gas/mist/vapors/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+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.
	P362+P364	Take off contaminated clothing and wash it 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

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 Irritation	2	H315
Skin Sensitization	1	H317
Eye Damage	1	H318
Hazardous to the Aquatic Environment, Chronic	3	H412

2.2 Label Elements

UN GHS

DANGER

Hazard Statement	Code
Causes skin irritation	H315
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Causes serious eye damage	H318
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Precautionary Measures

Category	Code	Statement
Prevention	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P264	Wash thoroughly after handling.
	P272	Contaminated work clothing should not be allowed out of the workplace.
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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+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.
	P362+P364	Take off contaminated clothing and wash it 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

Hazard Class	Category	Code
Skin Irritation	2	H315
Skin Sensitization	1	H317
Eye Damage	1	H318

2.2 Label Elements

OSHA HCS 2012

DANGER

Hazard Class	Category	Code
Skin Irritation	2	H315
Skin Sensitization	1	H317
Eye Damage	1	H318

Precautionary Measures

Category	Code	Statement
Prevention	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P264	Wash thoroughly after handling.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
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	P310	Immediately call a POISON CENTER or doctor/physician.
	P362+P364	Take off contaminated clothing and wash it 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

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 Irritation	2	H315
Skin Sensitization	1	H317
Eye Damage	1	H318

2.2 Label Elements

WHMIS 2015

DANGER

Hazard Class	Category	Code
Skin Irritation	2	H315
Skin Sensitization	1	H317
Eye Damage	1	H318

Precautionary Measures

Category	Code	Statement
Prevention	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P264	Wash thoroughly after handling.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
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	P310	Immediately call a POISON CENTER or doctor/physician.
	P362+P364	Take off contaminated clothing and wash it 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

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	4-12%		**GHS / CLP / OSHA / WHMIS:** Skin Irrit. 2; Skin Sens. 1 ; Eye Irrit. 2
Polyethylene glycol diacrylate	26570-48-9	3-10%		**GHS / CLP / OSHA / WHMIS:** Skin Irrit. 2; Skin Sens. 1 ; Eye Dam. 1
2-Hydroxy-3-phenoxypropyl acrylate	16969-10-1	3-9%		**GHS / CLP:** Skin Sens. 1; Eye Dam. 1; Aquatic Chronic 2 **OSHA / WHMIS:** Skin Sens. 1; Eye Dam. 1
Dipropylene glycol dibenzoate	27138-31-4	2-7%	Ingestion/Oral-Rat LD50 3914 mg/kg; Skin-Rat LD50 >2000 mg/kg	**GHS / CLP:** Aquatic Chronic 3 **OSHA / WHMIS:** Not classified
Tripropylene glycol diacrylate	42978-66-5	1-3%	Ingestion/Oral-Rat LD50 >2000 mg/kg; Skin-Rabbit LD50 >2000 mg/kg	**GHS / CLP:** Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2; STOT SE 3; Aquatic Chronic 2 **OSHA / WHMIS:** Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2; STOT SE 3
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	84434-11-7	0.5-2.5%	Ingestion/Oral-Rat LD50 >5000 mg/kg; Skin-Rat LD50 >2000 mg/kg	**GHS / CLP:** Skin Sens. 1; Aquatic Chronic 2 **OSHA / WHMIS:** Skin Sens. 1
2-Phenoxyethyl acrylate	48145-04-6	0.15-0.5%	Ingestion/Oral-Rat LD50 5145 mg/kg	**GHS / CLP:** Skin Sens. 1; Repr. 2; Aquatic Chronic 2 **OSHA / WHMIS:** Skin Sens. 1; Repr. 2
Phenyl bis(2,4,6-trimethylbenzoyl)phosphine oxide	162881-26-7	0.1-0.3%	Ingestion/Oral-Rat LD50 >2000 mg/kg; Skin-Rat LD50 >2000 mg/kg	**GHS / CLP:** Skin Sens. 1; Aquatic Chronic 4 **OSHA / WHMIS:** Skin Sens. 1

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, CO2, 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 (COx), nitrogen oxides (NOx).

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		
Environmental			
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	Skin Irritation 2
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	Based on available data, the classification criteria are not met
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

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

Dipropylene glycol dibenzoate CAS #27138-31-4

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

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

Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate CAS #84434-11-7

Toxicity to fish — LC50 - Danio rerio (zebra fish) - 1.89 mg/l - 96 h

Toxicity to daphnia — EC50 - Daphnia magna (Water flea) - 2.26 mg/l - 48 h

Toxicity to algae — EC50 - Pseudokirchneriella subcapitata (green algae) - 1.01 mg/l - 72 h

Phenyl bis(2,4,6-trimethylbenzoyl)phosphine oxide CAS #162881-26-7

Toxicity to fish — LC50 - Danio rerio (zebra fish) - > 0.09 mg/l - 96 h

Toxicity to daphnia — EC50 - Daphnia magna (Water flea) - > 1.17 mg/l - 48 h

Toxicity to algae — ErC50 - Desmodesmus subspicatus (green algae) - > 0.26 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 ≥ 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:

Phenoxymethyl oxirane CAS #122-60-1 <0.009%

Section 16 - Other Information

Relevant phrases (code & full text)

H315 - Causes skin irritatin.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H412 - Harmful to aquatic life with long lasting effects.

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

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

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

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

EUH208 - Contains sensitizing substance. May produce an allergic reaction.

Classification method for mixtures: Calculation method.
Last revision date: 26 February 2024
Preparation date: 22 August 2024
Changes to the current revision: Hazard classifications, precautionary phrases and pictograms in Section 2; composition information in Section 3.2; toxicological information in Section 11; ecological toxicity data in section 12.1; Proposition 65 information in Section 15.3.
Other information
Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.
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