

SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 1
Product name Photosensitive resin

Issue date 27-Feb-2017
Revision date 27-Feb-2017

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name Photosensitive resin

Other means of identification

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended use
Uses advised against No information available.

Details of the supplier of the safety data sheet

Supplier Wanhao Precision Casting Co., Ltd
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2. HAZARDS IDENTIFICATION

GHS classification

Acute toxicity - Oral Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1
Skin sensitization Category 1
Specific target organ toxicity (repeated exposure) Category 2
Chronic aquatic toxicity Category 3

Label elements

Symbols/Pictograms



Signal word
Hazard statements

Danger
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.

Precautionary statements	H317 - May cause an allergic skin reaction. H373 - May cause damage to organs through prolonged or repeated exposure. H412 - Harmful to aquatic life with long lasting effects.
Prevention	P264 - Wash face, hands and any exposed skin thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P272 - Contaminated work clothing should not be allowed out of the workplace. P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P273 - Avoid release to the environment.
Response	P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 - Rinse mouth. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P332 + P313 - If skin irritation occurs: Get medical advice/attention. P362 - Take off contaminated clothing and wash before reuse. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor/physician. P314 - Get medical advice/attention if you feel unwell.
Storage	No information available.
Disposal	P501 - Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

No information available.

Unknown acute toxicity

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical nature</u>	Mixture		
Chemical name	CAS No	Weight-%	
Polyurethane acrylate	-	45 - 47	
Morpholine, 4-(1-oxo-2-propenyl)-	5117-12-4	34 - 36	
Tripropylene glycol diacrylate	42978-66-5	15 - 17	
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	162881-26-7	1.6 - 2.0	
Pentaerythritol triacrylate	3524-68-3	0.8 - 1.2	
4-Methoxyphenol	150-76-5	0.02 - 0.07	

4. FIRST AID MEASURES

Description of first aid measures

General advice	Remove contaminated clothing and shoes. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. In the case of skin irritation or allergic reactions see a physician. If symptoms persist, call a physician.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Eye contact	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	Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Extinguishing media**

Suitable extinguishing media Foam, dry chemical, water fog or CO₂.
 Unsuitable extinguishing media High volume water jet.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors, such as carbon oxides, nitrogen oxides, phosphorous oxides.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out. Evacuate personnel to safe areas.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ensure adequate ventilation, especially in confined areas. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Avoid breathing mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash thoroughly after handling.

Methods and material for containment and cleaning up

Local authorities should be advised if significant spillages cannot be contained. Prevent entry into waterways, sewers, basements or confined areas.
 Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE**Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Ensure adequate ventilation, especially in confined areas. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Do not breathe mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Keep locked up and out of reach of children. Keep away from food, drink and animal feeding stuffs. Store in accordance with local regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
4-Methoxyphenol (CAS #:	TWA: 5 mg/m ³	(vacated) TWA: 5	TWA: 5 mg/m ³	TWA: 5 mg/m ³	-

150-76-5)		mg/m ³			
Chemical name	Latvia	France	Finland	Germany	Italy
4-Methoxyphenol (CAS #: 150-76-5)	-	TWA: 5 mg/m ³	-	-	-
Chemical name	Poland	Portugal	Spain	Switzerland	Netherlands
4-Methoxyphenol (CAS #: 150-76-5)	TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³	-	-
Chemical name	Norway	United Kingdom	Australia	Austria	Belgium
4-Methoxyphenol (CAS #: 150-76-5)	TWA: 5 mg/m ³ STEL: 5 mg/m ³	-	5 mg/m ³	STEL 10 mg/m ³ TWA: 5 mg/m ³	-

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.

Individual protection measures, such as personal protective equipment

Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hand protection	Wear protective gloves.
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Appearance	Liquid
Color	Transparent
Odor	Odorless
Odor threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	Not determined
Flash point	Not applicable
Evaporation rate	Not determined
Flammability (solid, gas)	Not flammable
Flammability limit in air	Not applicable
Vapor pressure	Not determined
Vapor density	Not applicable
Density	Not determined
Relative density	Not determined
Bulk density	Not determined
Specific gravity	Not determined
Water solubility	Not determined
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not applicable
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined

Other information

No information available

10. STABILITY AND REACTIVITY

Reactivity

No known effects under normal use conditions.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks. Incompatible materials.

Incompatible materials

Strong oxidizing agents. Strong bases.

Hazardous decomposition products

Carbon oxides, nitrogen oxides, phosphorous oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact	Causes serious eye damage.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	Harmful if swallowed.

Information on toxicological effects

Acute toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Tripropylene glycol diacrylate (CAS #: 42978-66-5)	= 6200 mg/kg (Rat)	> 2 g/kg (Rabbit)	-
Pentaerythritol triacrylate (CAS #: 3524-68-3)	= 1350 mg/kg (Rat) = 1830 mg/kg (Rat)	= 4 mL/kg (Rabbit)	-
4-Methoxyphenol (CAS #: 150-76-5)	= 1600 mg/kg (Rat)	-	-

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical name	Algae/Aquatic plants EC50	Fish LC50	Crustacea EC50
Tripropylene glycol diacrylate (CAS #: 42978-66-5)	28: 72 h Desmodesmus subspicatus mg/L EC50	4.5 - 10: 96 h Leuciscus idus mg/L LC50	88.7: 48 h Daphnia magna mg/L EC50
4-Methoxyphenol (CAS #: 150-76-5)	-	84.3: 96 h Pimephales promelas mg/L LC50 flow-through 28.5: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	-

Persistence and degradability

No information available.

Bioaccumulative potential

Chemical name	Partition coefficient (LogPow)
Tripropylene glycol diacrylate (CAS #: 42978-66-5)	2.77
4-Methoxyphenol (CAS #: 150-76-5)	1.34

Mobility in soil

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
4-Methoxyphenol 150-76-5	-	Included in waste stream: K060	-	-

14. TRANSPORT INFORMATION

UN/ID No.	Not regulated
UN proper shipping name	Not regulated
Hazard class	Not regulated
Packing group	Not regulated
Special precautions	No information available
Marine pollutant	Non-marine pollutant

15. REGULATORY INFORMATION**International inventories**

Component	AICS	DSL/NDL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	TSCA
Morpholine, 4-(1-oxo-2-propenyl) - 5117-12-4 (34 - 36)	X	X	X	X	X	X	X	X
Tripropylene glycol diacrylate 42978-66-5 (15 - 17)	X	X	X	X	X	X	X	X
Phosphine oxide, phenylbis(2,4,6-trim ethylbenzoyl)- 162881-26-7 (1.6 - 2.0)	X	X	X	X	X	X	X	X
Pentaerythritol triacrylate 3524-68-3 (0.8 - 1.2)	X	X	X	X	X	X	X	X
4-Methoxyphenol 150-76-5 (0.02 - 0.07)	X	X	X	X	X	X	X	X

"-" Not Listed

"X" Listed

US Federal Regulations

SARA 313

Not applicable

SARA 311/312 Hazard Categories

Not applicable

CWA (Clean Water Act)

Not applicable

CERCLA

Not applicable

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
4-Methoxyphenol 150-76-5	X	X	X

16. OTHER INFORMATION

Revision note

Issue date 27-Feb-2017
 Revision date 27-Feb-2017
 Revision note Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (Time Weighted Average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value

TSCA - Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial chemical Substances/European List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korea Existing Chemicals List

PICCS - The Philippine Inventory of Chemicals and Chemical Substances

AICS - The Australian Inventory of Chemical Substances

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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