



HeatResist™

Heat-Resistant Resin For Coating & Casting

Safety and Data Sheet

SECTION 1: Identification of the substance and the company

1.1 Product Identifier

Product name

HeatResist™ - Heat-Resistant Resin For Coating & Casting

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

Product use

Artwork coating and casting of small objects (<1 litre) that require hardness, durability and surface heat resistance of 80-95°C.

1.3 Details of the supplier of the safety data sheet

Resin Play

37 Beach Road, #02-02

Singapore 189678

Phone: +65 8738 3404 (Mon, Wed-Sat | 10:30am-6:00pm)

Email: info@resinplay.sg

Website: www.resinplay.sg

1.4 Emergency telephone number

Phone: +65 8738 3404 (Mon, Wed-Sat | 10:30am-6:00pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification under CHIP

Xi: R36/38; Sens.: R43; N: R51/53

Classification under CLP

Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317

2.2 Label elements



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Label elements under CLP

Hazard statements

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

Signal word: Warning

Hazard pictograms: GHS07: Exclamation mark

GHS09: Environmental



Precautionary statements

P264: Wash hands thoroughly after handling. P273: Avoid release to the environment.

P280: Wear protective gloves.

P305 + 351 + 338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + 313: If skin irritation occurs: Get medical attention.

P362: Take off contaminated clothing and wash before reuse.

Label elements under CHIP

Hazard symbols: Irritant.

Dangerous for the environment.



Risk phrases

R36/38: Irritating to eyes and skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the



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aquatic environment.

Safety phrases

S24: Avoid contact with skin.

S37: Wear suitable gloves.

S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

2.3 Other hazards

PBT: This substance is not identified as a PBT substance.

SECTION 3: Composition/Information on ingredients

3.2 Mixtures

Hazardous ingredients (Resin):

BISPHENOL A- (EPICHLORHYDRIN) {REACTION PRODUCT}

EINECS	CAS	CHIP Classification	CLP Classification	%
500-033-5	25068-38-6	Xi: R36/38; Sens.: R43; N: R51/53	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Chronic 2: H411	>90

Hazardous ingredients (Hardener):

MODIFIED AMINE MIXTURE

EINECS	CAS	CHIP Classification	CLP Classification	%
-	135108-88-2	Xi: R20/21/22/34/36/37/38; Sens.: R43/52/53	H315/317/319; Aquatic Chronic 3: H412	100



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SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

In cases of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact

Wash skin thoroughly with soap and water or use a recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms appear.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if symptoms persist.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. No specific treatment, treat symptomatically.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact

There may be irritation and redness at the site of contact.

Eye contact

There may be irritation and redness. The eyes may water profusely.

Ingestion

There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation

Exposure may cause coughing or wheezing.



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Delayed / immediate effects

Delayed effects can be expected after short term exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate / special treatment

Not applicable.

SECTION 5: Fire-fighting measures

Flammability of the product

May be combustible at high temperatures

Auto-ignition temperature

The lowest known value is 336.9°C (638.4°F) (Triethylenetetramine).

Flash points

The lowest known value is Closed cup: 98.9°C (210°F). Open cup: 97.9°C (208°F). (Cleveland). (Diethylenetriamine).

Flammable limits

Not available

Products of combustion

These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire hazards in presence of various substances

Slightly flammable to flammable in presence of open flame, sparks and static discharge, of heat.

Explosion hazards in presence of various substances

None identified

Fire fighting media and instructions



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In case of fire, use water spray (fog), foam, dry chemical, or CO₂.

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Special remarks on fire hazards

When heated to decomposition, it emits toxic fumes. (Diethylenetriamine).

Special remarks on explosion hazards

No additional remarks.

SECTION 6: Accidental release measures

Personal precautions

Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment. Follow all fire fighting procedures.

Environmental precautions

Do not discharge into drains or rivers. Contain the spillage using bunding.

Clean-up procedures

Minimize contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information. If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Refer to section 8 of SDS.

SECTION 7: Handling and storage



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Handling

Do not ingest. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use suitable protective equipment (Section 8).

Storage

Keep container tightly closed. Keep container in a cool, well-ventilated area.

Packaging materials recommended

Use original container.

SECTION 8: Exposure controls/personal protection

Exposure controls

Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Respiratory protection

A respirator is not needed under normal and intended conditions of product use. Wear appropriate respirator when ventilation is inadequate.

Hand protection

Rubber gloves. Neoprene gloves.

Eye protection

Safety glasses. Goggles, face shield, or other full-face protection if potential exists for direct exposure to aerosols or splashes.

Skin protection

Additional body garments should be used based upon the task being performed (e.g. sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Appropriate techniques should be used to remove potentially contaminated clothing.



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Personal protective Equipment (Pictograms)



Occupational exposure limits: n/a

SECTION 9: Physical and chemical properties

State: Liquid
Colour: Clear transparent
Odour: Mild odour
Viscosity: Free flowing liquid
Boiling point/range°C: 240°C
Flash point°C: >200°C (Resin) / 125°C (Hardener)
Relative density: 1.1 – 1.15 g/cm³
pH: 7

SECTION 10: Stability and reactivity

Stability and reactivity

The product is stable

Conditions of instability

Heat and cold below 0°C

Incompatibility with various substances

Reactive with acids, strong bases, oxidising agents.

Hazardous decomposition products

These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...)



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Hazardous polymerization

Will not occur under normal transport or storage conditions.

SECTION 11: Toxicological information

Potential acute health effects

Inhalation: Avoid inhalation, use adequate ventilation.

Ingestion: Ingestion may cause gastrointestinal irritation and diarrhea. There may be soreness and redness of the mouth and throat. Harmful if swallowed.

Skin contact: Irritating to skin. May cause sensitisation by skin contact.

Eye contact: Irritating to eyes / causes burns.

Potential chronic health effects

Ingredient Name	Carcinogenic Effects	Mutagenic Effects	Developmental toxicity Toxic to reproductive Health Categ. 3	Impairs fertility
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Over-exposure signs/symptoms

Target Organs: Contains material, which causes damage to the following organs: lungs, kidneys, liver, gastrointestinal tract, cardiovascular system, skin, eye, lens or cornea.

Other adverse effects: None identified

SECTION 12: Ecological information

Ecotoxicity data

Ingredient Name	Species	Period	Result
BOD and COD:	Not available.		
Biodegradable/OECD:	Not biodegradable.		
Mobility:	Readily absorbed into soil.		



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Products of Degradation:	These products are carbon oxides (CO, CO ₂) and water, nitrogen oxides (NO, NO ₂ ...).
Toxicity of the Products of Biodegradation:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The products of biodegradation are less toxic than the original product.
Special Remarks on the Products of Biodegradation:	Not expected to bio-accumulate.

SECTION 13: Disposal considerations

<u>Waste disposal</u> Transfer to a suitable container and arrange for collection by specialised disposal company.
<u>Waste stream</u> Not applicable.
<u>Waste code no.</u> 070208
<u>NB:</u> The user's attention is drawn to the possible existence of regional or national regulations regarding disposal. Consult your local or regional authorities.



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SECTION 14: Transport information


Regulatory Information	UN number	Proper Shipping Name	Class	Packing Group	Label	Additional Information
ADR/RID/SA BS 0228 Class	Not regulated					
IMDG Class	Not regulated					
IATA-DGR Class	Not regulated					

SECTION 15: Regulatory information

Hazard symbol(s)



Irritant (Resin)



Irritant/Harmful (Hardener)



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Risk phrases (Resin)

R36/38- Irritating to eyes and skin.

R43- May cause sensitisation by skin contact.

R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Risk phrases (Hardener)

R20/21/22 – Harmful by inhalation, in contact with skin and if swallowed.

R43 – May cause sensitisation by skin contact.

R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R62 – Possible risk of impaired fertility.

R63 – Possible risk of harm to the unborn child.

Safety phrases (Resin)

S24- Avoid contact with skin.

S29- Do not empty into drains

S37- Wear suitable gloves.

S46- If swallowed, seek medical advice immediately and show this container or label.

Safety phrases (Hardener)

S25 – Avoid contact with eyes.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.

Contains

Reaction product: bisphenol A-(epichlorhydrin) 500-033-5 (Resin)

Amines (Hardener)

Product Use

Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amended and the intended use.

- Industrial applications.



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SECTION 16: Other information

Other information

This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

*indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

R21: Harmful in contact with skin.

R36/38: Irritating to eyes and skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Notice

To the best of our knowledge, the information contained herein is accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information and to comply with all laws and procedures applicable to the safe handling and use of the product. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.