

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Tough Resin**
Product Use: 3D Printing Resin
Restriction of use: See Section 15

Supplier: Embedded Logic Solutions Pty. Ltd
5/23 Hunt Street
North Parramatta NSW 2151 Australia
Telephone: +61 2 9687 1880
Fax Number: +61 2 9687 1881
Website: www.emlogic.com.au

New Zealand Contact: Responsible Care New Zealand
Level 7, City Chambers
Johnston St
Wellington
Telephone: 04 499 4311

Emergency Telephone: **Australia - 13 1126**
NZ - 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 1 May 2025

Section 2. Hazards Identification

Australia:

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

New Zealand:

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2020

EPA Approval Code: Surface Coatings and Colourants (Subsidiary) – HSR002670

Pictograms



Signal Word: **Warning**

GHS Classification and Category	Hazard Code	Hazard Statement
Skin irritation Cat. 2	H315	Causes skin irritation.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction.
Reproductive toxicity Cat. 2	H361	Suspected of damaging fertility or the unborn child.
Hazardous to the aquatic environment	H411	Toxic to aquatic life with long lasting

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chronic Cat. 2		effects.
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Prevention Code Prevention Statement

P103	Read carefully and follow all instructions.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing fumes, gas, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in SDS Section 8.

Response Code Response Statement

P391	Collect spillage.
P302 + P352	IF ON SKIN: Wash with plenty of 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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash before reuse.

Storage Code Storage Statement

P405	Store locked up.
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Disposal Code Disposal Statement

P501	Dispose of in accordance with Local Regulations
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Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
2-Hydroxyethyl methacrylate	20-50	868-77-9
Aliphatic urethane dimethacrylate	50-80	Proprietary
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	1-3	75980-60-8
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)	1-3	162881-26-7

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	In case of eye contact, immediately rinse with clean water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	Rinse immediately with plenty of water for 15 minutes. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.
If Swallowed	Rinse mouth. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position

and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.

Inhalation: Not applicable.

Skin: Causes skin irritation. May cause an allergic skin reaction.

Eye: Serious irritation to eyes.

Chronic: Suspected of damaging fertility or the unborn child.

Notes to Doctor: Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable and Non Combustible
Hazards from combustion products	Under fire conditions, hazardous fumes will be present. Thermal decomposition may produce: Carbon oxides (CO, CO ₂). Phosphorus oxides. Toxic fumes may be released.
Suitable Extinguishing media	Water fog. foam. dry chemical powder. Do not use water jet.
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus. Complete protective clothing. Prevent firefighting water from entering the environment.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear protective clothing as described in Section 8. Ventilate spillage area. Do not breathe spray, mist, vapours. Avoid contact with skin and eyes. Evacuate unnecessary personnel. Stop leak if safe to do so.

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Collect spillage. Take up liquid spill into inert absorbent material. Notify authorities if product enters sewers or public waters. Collect all waste in suitable and labelled containers and dispose according to local legislation. Dispose as per Section 13.

Section 7. Handling and Storage

Handling:

- Read carefully and follow all instructions.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing fumes, gas, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in SDS Section 8.
- Take precautionary measures to prevent the formation of static electricity.
- Cool heated containers to prevent curing.
- Ensure good ventilation of the work station.
- Avoid contact with skin and eyes.
- Wash contaminated clothing before reuse.

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- Do not eat, drink or smoke when using this product.

Storage:

- Store locked up.
- Store in a well-ventilated place. Keep cool.
- Keep out of reach of children.
- Incompatible materials: Strong reducing agents. Strong acids, strong bases and oxidation agents. Amines. Peroxides. Free radical initiators.
- Storage temp = 0°C - 40 °C

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	CAS #	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices FEB 2025 15TH EDITION.

Engineering Controls

Ensure good ventilation of the workstation.

Personal Protection Equipment



Eyes	Chemical goggles or safety glasses. EN 166
Hands	Chemically resistant protective gloves. EN 374
Skin	Long sleeved protective clothing.
Respiratory	In case of inadequate ventilation wear respiratory protection. An approved organic vapour respirator/supplied air or self-contained breathing apparatus must be used when vapour concentration exceeds applicable exposure limits.

Section 9 Physical and Chemical Properties

Appearance	Yellow Liquid
Odour	Acrylic
Odour Threshold	Not available
pH	≈7
Boiling Point	> 100 °C
Melting Point	Not available
Freezing Point	Not available
Flash Point	> 100 °C
Flammability	Non-Flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	3.52Kpa (25°C)

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Density	1.09 g/cm ³ (55°C)
Relative Density	1.11 g/cm ³ (20°C)
Solubilities	Water: Very little Organic solvent: Soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Dynamic, Viscosity	≈ 150 mPa·s (25°C)

Section 10. Stability and Reactivity

Stability of Substance & Reactivity	This product is stable under normal conditions.
Possibility of hazardous reaction	No dangerous reactions known under normal conditions of use. Can polymerise exothermically in the absence of stabilisers, particularly in acid conditions or if shelf life exceed.
Conditions to Avoid	Direct sunlight. UV sources. Heat sources. Moist. Extremely high or low temperatures.
Incompatible Materials	Strong reducing agents. Strong acids, strong bases and oxidation agents. Amines. Peroxides. Free radical initiators.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes serious eye irritation.
Skin	Causes skin irritation. May cause an allergic skin reaction.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

Toxic to aquatic life with long lasting effects.

Persistence and degradability	No additional information available
Bioaccumulation	No additional information available
Mobility in Soil	No additional information available
Other adverse effects	Avoid release to the environment.

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Disposal methods to avoid: Do not allow to enter the waterways.

Section 14 Transport Information

This product is classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) (7th edition).

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2020



Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S (Acrylic polymers-other)
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

Australia:

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

New Zealand:

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2020.

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HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L
Emergency Response Plan	1000L
Secondary Containment	1000L
Restriction of Use	Only use for the intended purpose.

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Section 16 Other Information

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms in-
haling or ingesting it.	
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

Australia:

1. Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
2. Standard for the Uniform Scheduling of Medicines and Poisons.
3. Australian Code for the Transport of Dangerous Goods by Road & Rail.
4. Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
5. Workplace exposure standards for airborne contaminants, Safe work Australia.
6. American Conference of Industrial Hygienists (ACGIH).
7. Globally Harmonised System of classification and labelling of chemicals.

New Zealand:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices FEB 2025 15th edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

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