ALEC TIRANTI LIMITED

TOOLS, MATERIALS & EQUIPMENT FOR MODELLING, CARVING, SCULPTURE
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Material Safety Data Sheet

Polyester Resins / Gel Coat Resin
Wax in Styrene

1. IDENTIFICATION OF PREPARATION

Material / Trade Name: Polyester Resin for the GRP industry and Sculpture. Wax in styrene is an additive for polyester resin.
Intended Use:

2. COMPOSITION / INFORMATION ON INGREDIENTS

	Polyester Resin	*Gel Coat Resin*		*Wax in Styrene*
Name:	Styrene	Styrene	Dibutylm	Styrene
Conc. Range %:	25 – 50	25 – 25	2.5 – 10	90 - 100
Symbol Letter:	Xn	Xn	Xi	Xn
R-Phrases:	R10, 20, 38/38	R10, 20, 38/38	R36/38	R10, 20, 38/38

3. HAZARD IDENTIFICATION

R-10 **Flammable**
R-20 **Harmful by Inhalation**
R-36/38 **Irritating to the Eyes and skin**

4. FIRST AID MEASURES

General: In cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped administer artificial respiration. Give nothing by mouth. If unconscious place in recovery position and seek medical advice.

Eye Contact: Irrigate copiously with water for at least 10 minutes, holding eyelids apart. Seek medical advice.

Skin Contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. DO NOT use solvents or thinners.

Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting

5. FIRE FIGHTING MEASURES

Suitable Extinguishers: Alcohol resistant foam, CO_2, powders, water spray
Unsuitable Extinguishers: Waterjet
Recommendations: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate area. Avoid breathing vapour. Refer to protective measures listed in section 7 & 8. Contain and collect spillage with non-combustible materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or water-courses.
Clean preferably with detergent; avoid use of solvents.
If product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. In the UK the Local Water Authority, the National Rivers Authority and HMIP must be informed.

7. HANDLING & STORAGE

Handling:

The vapour is heavier than air and may spread along floors. Vapour may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational limits.

Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Preparation may charge electrostatically; always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep containers tightly closed. Isolate from sources of heat, sparks and open flame. Non-sparking tools should be used.

Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.
Smoking, eating and drinking should be prohibited in application area.
For personal protection see Section 8.
Never use pressure to empty containers. They are not pressure vessels.
Always keep in containers of same material as the original one. Comply with the Health & Safety at work laws

Storage:

Store in accordance with local regulations.
Observe label precautions. Store in temperatures below 20°C, in well ventilated place away from sources of heat and direct sunlight.
Keep away from sources of ignition. Keep away from oxidising agents, strong alkaline materials and strongly acidic materials.
No smoking. Prevent unauthorised access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures:

Provide adequate ventilation. Where practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentration of particulates and/or solvent vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn.

Exposure Limits:

Occupational exposure limits (OEL) STEL (1) 250 ppm TWA (2) 100 ppm

(1) Short term exposure limit.
(2) Time weighted average exposure limit, but with a duty to reduce as low as possible.

Personal Protection:

Respiratory protection: Full face or half-mask, with filter, suitable for organic vapour. When spraying or working at high concentrations, use self-contained breathing apparatus.

Hand Protection:
For prolonged or repeated contact, use resistant gloves of polyvinylalcohol, ethylenvinyl-alcohol or Teflon.
Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye Protection:
Use safety eyewear designed to protect against splash of liquids.

Skin Protection:
Personnel should wear antistatic clothing made of natural fibre or high temperature resistant synthetic fibre. All parts of the body should be washed after contact.

9. PHYSICAL & CHEMICAL PROPERTIES	Polyester Resins	Gel Coat Resin	Wax in Styrene
Physical State:	Viscous	Viscous	Liquid
Flash Point:	32°C	34°C	32°C
Viscosity:	180-600 cps	150-1000 cps	10-30 cps
Specific Gravity:	1.05 - 1.25 g/cm^3	1.1 - 1.5 g/cm^3	0.9 - 0.95 g/cm^3
Vapour Density:	3.6 (styrene)	3.6 (styrene)	3.6 (styrene)
Lower Exposure Limit:	1.10 (styrene)	1.10 (styrene)	1.10 (styrene)
Solubility if Water:	immiscible	immiscible	immiscible

10. STABILITY & REACTIVITY

Stable under recommended storage and handling conditions (see Section 7). When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.
Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

11. TOXICOLOGICAL INFORMATION

There is no data available on the preparation itself.
Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache; dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage. (Ref. Sax / Lewis: "Dangerous Properties of Industrial Materials")

12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.
The product should not be allowed to enter drains or water courses.

13. DISPOSAL CONSIDERATIONS

Do not allow into drains or water courses. Wastes and emptied containers should be handled according to local regulations. In the UK the Environmental Protection Act, 1990, applies. Advice should be sought from the Local Authority regarding disposals of resins, containers and other contaminated waste.

14. TRANSPORT INFORMATION

Transport only in accordance with ADR for road, RID for rail and IMDG for sea.

Not regulated according to ADR marginal 2301D

	Polyester Resin	***Gel Coat Resin***	***Wax** in **Styrene***
IMDG:	Class 3.3 UN Nr.1866 (all three)		
	Proper shipping name		
	Resin solution in styrene	Resin solution in styrene	Styrene (containing
	Label 3 (all three)		
	Marine Pollutant: Yes (all three)		
	EmS: 3-05 MFAG: 310 (all three)		
	Packaging Group: III (all three)		

15. REGULATORY INFORMATION

The information in this safety sheet does not constitute the user's own assessment of workplace risks as are required by other health and safety legislation. The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

In accordance with 88/379/EEC the product is labelled as follows:

Danger classification:	Harmful	
Contains:	Styrene	
R phrases:	R-10	Flammable
	R-20	Harmful by inhalation
	R-36/38	Irritating to Eyes and Skin
S phrases	S-2:	KEEP OUT OF REACH OF CHILDREN
	S-23	Do not breathe vapour or spray
	S-26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S-38	In case of insufficient ventilation, wear suitable respiratory equipment.
	S-51	Use only in well ventilated areas.

16. OTHER INFORMATION

The information contained in this Safety Data Sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations.

This product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use are outside the supplier's control, the user is responsible for ensuring that the requirements of the relevant legislation are complied with. The information contained in this Safety Data Sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

Further information can be found in:
The Control of Substances Hazardous to Health Regulations 1988 (SI 1988:1657)
The Manual Handling Operations Regulations 1992 (SI 1992: 2793)
The Environmental Protection (Duty of Care) Regulations 1992 (SI 1992: 2839)