

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER: METPREP LTD.
CURRIERS CLOSE
CHARTER AVENUE
COVENTRY CV4 8AW

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CHEMICAL NAME:

PRODUCT: KLEER SET RESIN

PRODUCT NUMBERS: 11 10 81, 11 10 82

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NATURE:

INGREDIENT (S):	CAS NUMBER: %:	HAZARD SYMBOL:	R PHRASES:
Styrene	100-42-5	25-50 Xn	10,20,36/38:

3. HAZARDS IDENTIFICATION

R-10: Flammable

R-20: Harmful by inhalation

R-36/38: Irritating to the eyes and skin

4. FIRST AID MEASURES

GENERAL INFORMATION: In all 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.

SKIN: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

EYE: Irrigate copiously with clean, fresh water for at least 10 minutes, holding eyelids apart. Seek medical advice.

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

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: alcohol resistant foam, CO₂, powders, water spray. Keep fire exposed containers cool by spraying with water.

FIRE & EXPLOSION HAZARDS: Fine mists or sprays may be flammable at temperatures below the flash point. May polymerize on heating. Sealed containers may rupture explosively if hot.

FIRE FIGHTING PROTECTIVE EQUIPMENT: Fire will produce dense black smoke. Exposure to decomposition products may cause 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 watercourses.

6. ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate the area. Avoid breathing vapour. Refer to protection measures listed in section 7 and 8. Contain and collect spillage with non-combustible materials, e.g. sand, earth, vermiculite,

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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 a detergent, avoid use of solvents.

If the product contaminates lakes, rivers or sewerage, 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 AND STORAGE

HANDLING: The vapour is heavier than air and may spread along floors. Vapour may form explosive mixture with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than 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 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 and safety at work laws

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

IMPORTANT: Methacrylate stored in bulk must be kept in contact with air (oxygen).

STORAGE TEMPERATURE: Preferably not exceeding 20 °C.

INDUSTRIAL HYGIENE PRACTICES: Wash face and hands thoroughly with the soap and water after use and before eating, drinking, smoking or applying cosmetics.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Measures.

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulate and solvent vapour below the OEL, suitable respiratory protection must be worn.

Exposure Limits.

Occupational exposure limit.(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.

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When spraying or working at high concentrations use self contained breathing apparatus.

Hand Protection:

For prolonged or repeated contact, use resistant gloves of polyvinylalcohol, ethylenvinylalcohol or Teflon.

Barrier creams may help to protect the exposed areas of 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 anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre. All parts of the body should be washed after contact

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	viscous liquid	
Flash Point:	32°C	Method: BS 2000 Part 170: 1992
Viscosity:	180 - 600 cps	Method: ISO 2884 - 1974
Specific Gravity:	1.05-1.25 g/cm ³	Method: ISO 2811 - 1974
Vapour Density:	3.6 (styrene)	
Lower exposure limit:	1.10 (styrene)	
Solubility in water:	immiscible	

10. STABILITY AND 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 oxidising agents, strongly alkaline and strongly acidic 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 effect 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.

Styrene: LD50 (oral rat): 5000 mg/kg.

(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 watercourses.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORTATION

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

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Not regulated according to ADR maringal 2301 D
 IMDG: Class 3.3 UN Nr. 1866
 Proper shipping name: Resin solution in styrene
 Label: 3
 Marine pollutant: yes
 EmS: 3-05 MFAG: 310
 Packaging group: III

Domestic containers of less than 450 L capacity are not regulated by DOT.

15. REGULATORY INFORMATION

EC REGULATIONS –
 EINECS: all chemical listed
 EEC Classification: HARMFUL
 Symbol: Indication of Danger Xn

Risk Phrases:	R10	Flammable
	R20	Harmful by inhalation
	R36/38	Irritating to eyes and skin.

Safety Phrases:	S2	KEEP OUT OF REACH OF CHILDREN
	S23	Do not breathe vapour/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. ADDITIONAL INFORMATION

This data sheet was prepared in accordance with Directive 91/155/EEC.

The above information has been gathered from reliable sources and is believed to be correct. However, the information is provided without any warranty, either expressed or implied. MetPrep Ltd shall not be held liable for any damage resulting from the handling of or contact with the above product.