

MATERIAL SAFETY DATA SHEET

Product: 3K Polyester

1. Identification of the substance/preparation and of the company.

Type : 3K Polyester- Flammable liquid

Commercial Product name: - Imperia Polyester

Information on Manufacturer / Supplier Company`s title:

Berger Paints India Ltd.

"Berger House"

129, Park Street

Kolkata – 700 017

Telephone No: 033-2229 9724

2. Composition / Information on ingredients

Chemical characterization (preparation) Specific formulation on the basis of unsaturated polyesters dissolved in styrene Dangerous constituents:

CAS-No.	EINECS/ELINCS	Chemical name	Content	Symbol(s)	R-phrase(s)
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100-42-5	202-851-5	Styrene:	40 – 50 %	Xn	10, 20, 36/38
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3. Hazard identification Classification

Xn Harmful R 10 Flammable.

R 20 Harmful by inhalation.

R 36/38 Irritating to eyes and skin.

4. First aid measures

After inhalation: Move victim to fresh air, loosen restrictive clothing and calm the victim.

Do not allow victim to become chilled. Keep victim warm. Keep airway open. Consult

Physician. After skin contact: Thoroughly wash skin with soap and water. Immediately

remove all contaminated clothing. Wash contaminated clothing prior to re-use.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult physician. After swallowing: Do not induce vomiting. Rinse mouth with water

5. Firefighting measures

Suitable extinguishing media:

Water fog, foam, extinguishing powder, carbon dioxide.

Particular hazards arising from the preparation itself, combustion products or resulting gases: Toxic gases may form. Personal Protective equipment: Wear suitable protective clothing. Wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions: Do not inhale vapours. Wear protective equipment. Keep away from unprotected people. Environmental precautions: Do not allow entering drains, surface waters, basements or pits. Methods for cleaning up / spillage removal:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Provide adequate ventilation.

7. Handling and storage Handling

Information for safe handling: Keep away from heat. Do not inhale vapours.

Avoid contact with skin and eyes.

Provide good ventilation and/or an exhaust system in the work area. Precautions against fire and explosion:

Keep away from sources of ignition. No smoking. Take precautionary measures against static discharges. Storage

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place. Information about storage in one common storage facility: Do not store together with organic peroxides.

Accelerator & Catalyst should be stored separately in segregated areas, allowing no chance of them coming in contact during storage, even in the odd cases of container leaking or spillage.

Catalyst to be preferably kept in dark in Air-conditioned chambers.

8. Exposure controls / personal protection

Critical values of exposure

CAS-No. Chemical name type Value 100-42-5 Styrene

TWA (= German AGW) 20 ml/m³ = ppm TWA (= German AGW) 86 mg/m³ ACGIH TWA = NIOSH TWA 50 ppm

ACGIH TWA 213 mg/m³

NIOSH TWA 215 mg/m³

ACGIH STEL = NIOSH STEL 100 ppm

ACGIH STEL 426 mg/m³

NIOSH STEL 425 mg/m³

OSHA TWA 100 ppm

OSHA Ceiling 200 ppm

Limitation and monitoring of exposure

Take precautionary measures against static discharges.

See also Information in Point 7, section storage.

Limitation and monitoring of exposure at workplace.

Respiratory protection: Use respiratory protection whenever ventilation is inadequate.

Hand protection: Protective gloves according to EN 374.

The glove manufacturer's instructions must be observed concerning the penetrability and the wearing-out time.

Eye protection: Tightly sealed safety glasses according to EN 166.

Body protection: Closed work clothing

General protection and hygiene measures:

Wash hands if worked with material; at breaks, lunch, shift changes, etc.

When using do not eat, drink or smoke.

9. Physical and chemical properties Appearance

Form: liquid

Colour: characteristic

Odour: like Styrene Safety relevant data

Important data concerning health- and environmental protection and safety thereto

Boiling temperature / boiling range: 145 °C

Melting point / melting range: n.a.

Flash point: 35 °C

Ignition temperature: >= 400 °C

Explosion limits: LEL (Lower Explosive Limit): 1.1 Vol%

UEL (Upper Explosive Limit): 8 Vol%

Vapour pressure: at 20 °C: 1 hPa

At 50 °C: (Styrene) <= 10 hPa

Density: at 20 °C: 1 – 1.1 g/ml

pH value: n.a.

Solubility in water: insoluble

Viscosity, B4 Ford cup: at 30 °C: >= 20 to 30 s

10. Stability and reactivity

Condition to avoid (hazardous reactions):

Keep away from heat.

Materials to avoid: Reacts violently with strong oxidizing agents such as sulphuric acid and chloro-sulfonic acid.

11. Toxicological information

Toxicological Tests: Acute toxicity: LD50 rat, oral: Styrene 5000 mg/kg

After inhalation: harmful

After skin contact: irritant

After eye contact: irritant general remarks Styrene:

LD50, rat, 1 min, inhalant: 11.00 mg/kg

Affects the central nervous system, possible disturbances from: 50ml/m³ Substance with a carcinogenic and genotoxic effect from which there is not to be expected an important contributor to the risk of cancer for persons as far as the MAK-value (German OEL) is observed.

Metabolism of styrene in the body via styrene-7,8-oxide to Mandelic acid and

Phenyl-glyoxyl acid.

12. Ecological information Details of elimination Analytical method: BSD des Th SB Degree of elimination: Styrene >= 60%

Text of valuation: Product is highly biodegradable. Eco-toxicological effects

Aqua toxicity: Styrene:

LD50 Fish: 96 h: 10 - 100 mg/l

Daphnia: 155 mg/l Values for acute toxicity: Fish: 4.8

Bacteria: 4.1

Effects in sewage plants: Technically correct releases of minimal concentrations to adapted biological sewage treatment facility, will not disturb the biodegradability of activated sludge.

Additional ecological information

General information: Do not allow to enter ground soil, sewage or drains.

13. Disposal considerations

Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

Contaminated packaging

Recommendation: Dispose of waste according to applicable local, state, and federal regulations.

14. Transport information Overland transport Warning board: ADR/RID: Kemmler-number 30, Substance number 1866

Description of goods: 3K Polyester, flammable

UN number: 1866 contains styrene ADR/RID Class 3, Code: F1 Packaging group III Label 3

Special provisions 640E

Limited quantities LQ7

Contaminated packaging: Instructions P001 - IBC03 - LP01 - R001

Contaminated packaging: Special provisions PP1 Special provisions for packing together MP19
Portable Tanks: Instructions T2 Portable Tanks: Special provisions TP1 Tank coding LGBF

Transport by sea UN number: 1866 Proper shipping name: 3K Polyester.

Flammable. Contains Styrene

IMDG: Class 3 Packing

Group: III EmS number: F-E, S-E

Special provisions 223 - 944 - 955 Limited quantities 5 l

Contaminated packaging: Instructions P001 - LP01

Contaminated packaging: Provisions PP1

IBC: Instructions IBC03

IBC: Provisions -

Tank instructions: IMO T1

Tank instructions: UN T2

Tank instructions Provisions TP1

Stowage and segregation Category A.

Properties and observations Miscibility with water depends upon the composition.

Air transport

UN/ID number: 1866

Proper shipping name: 3K Polyester.

Flammable. Contains Styrene

ICAO/IATA: Class 3

Hazard Flammable liquid

Packing Group: III

Passenger Ltd.Qty: Y309 - Maximum quantity: 10 L

Passenger: 309 - Maximum quantity: 60 L

Cargo: 310 - Maximum quantity: 220 L

ERG 3L

15. Regulatory information Classification Code letter and hazard symbol: Xn Harmful

Printed by Otto Bock, Minneapolis ... with Qualisys SUMDAT R phrase(s): R 10 Flammable.

R 20 Harmful by inhalation.

R 36/38 Irritating to eyes and skin.

S phrase(s): S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition. No smoking.

S 23 Do not breathe gas/fumes/vapor/spray.

S 33 Take precautionary measures against static discharges. S 51 Use only in well-ventilated areas.

National regulations

National regulations USA

NFPA Hazard Rating:

- Health = 1 (Slight)

- Fire = 2 (Moderate)

- Reactivity = 0 (Minimal)

16. Other information. Further remarks

R phrase(s): R 10 = Flammable. R 20 = Harmful by inhalation.

R 36/38 = Irritating to eyes and skin.

Reason of change: Changes in section 8: EN166/EN374

Changes in section 11: General revision

Changes in section 14: ADR/RID 2005, ADNR 2005, IMDG 2004

Changes in section 15: NFPA

Group that issues data sheet

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. It does not represent a guarantee for the Properties of the product described in terms of the legal warranty regulations.