



PRITHVI CHEMSHIELD

Category: Two-Component (2K) High-Solids Low-VOC Polyurethane Clear Topcoat

SECTION 1 — IDENTIFICATION

Product Name	Prithvi CHEMSHIELD (Two-Pack Polyurethane Clear Coat, with isocyanate hardener)
Recommended Use	Industrial protective/decorative clear topcoat, applied by spray, for automotive refinishing and industrial coating applications
Restrictions on Use	For industrial / professional application only by trained personnel – not for consumer or retail use

SECTION 2 — HAZARD(S) IDENTIFICATION

GHS Classification	Flammable Liquid – Category 3; Acute Toxicity (Inhalation) – Category 4; Acute Toxicity (Dermal) – Category 4; Skin Irritation – Category 2; Eye Irritation – Category 2A; STOT (Single Exposure) – Category 3 (respiratory irritation; narcotic effects); Aquatic Chronic Toxicity – Category 2
Signal Word	Warning

Hazard Statements

- H226 – Flammable liquid and vapour
- H312 – Harmful in contact with skin
- H315 – Causes skin irritation
- H319 – Causes serious eye irritation
- H332 – Harmful if inhaled
- H335/H336 – May cause respiratory irritation; may cause drowsiness or dizziness
- H411 – Toxic to aquatic life with long lasting effects

Precautionary Statements

- P210 – Keep away from heat, sparks, open flames, hot surfaces. No smoking
- P233 – Keep container tightly closed
- P241 – Use explosion-proof electrical / ventilating / lighting equipment
- P261 – Avoid breathing vapour / spray mist
- P271 – Use only outdoors or in a well-ventilated area
- P280 – Wear protective gloves / eye protection / face protection
- P304 + P340 – IF INHALED: remove person to fresh air and keep comfortable for breathing
- P305 + P351 + P338 – IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing



- P403 + P235 – Store in a well-ventilated place. Keep cool
- P501 – Dispose of contents / container in accordance with local, state and national regulations

Pictogram(s) Required: GHS02 (Flame), GHS07 (Exclamation Mark), GHS09 (Environment)

Other Hazards: Vapours may form explosive mixtures with air. This SDS covers the base/clear component; the isocyanate-containing hardener component supplied with this two-pack system is packaged separately and must be handled per its own Safety Data Sheet. No PBT/vPvB assessment has been conducted.

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name / Ingredient	CAS No.	Conc. (% w/w)	GHS Classification
Xylene	1330-20-7	10 – 30%	Flam. Liq. 3, H226; Acute Tox. 4 (Inhalation), H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335
n-Butyl Acetate	123-86-4	10 – 30%	Flam. Liq. 3, H226; Eye Irrit. 2, H319; STOT SE 3, H336
Aromatic Hydrocarbon Mixture	64742-95-6	1 – 10%	Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H411
Iso-Butyl Alcohol	78-83-1	1 – 10%	Flam. Liq. 3, H226; Acute Tox. 4 (Inhalation), H332; Eye Dam. 1, H318; STOT SE 3, H335/H336
Methoxy Propyl Acetate	108-65-6	1 – 10%	Eye Irrit. 2, H319

Note: Exact composition is withheld as a trade secret in accordance with applicable regulations.

SECTION 4 — FIRST-AID MEASURES

Inhalation	Remove to fresh air and rest. If breathing is difficult, give oxygen or artificial respiration as required. Seek medical attention if symptoms persist.
Skin Contact	Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation persists.
Eye Contact	Immediately flush eyes with water for at least 15 minutes, including under eyelids. Seek medical attention.
Ingestion	Do not induce vomiting. Give 250 ml of water to drink if conscious. Seek immediate medical attention.
Most Important Symptoms / Effects	Irritation and redness of eyes and skin; headache, nausea, dizziness and narcosis from inhalation; extreme overexposure may cause unconsciousness
Indication of Immediate Medical Attention	Treat symptomatically. No specific antidote known.



SECTION 5 — FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Foam, dry chemical powder, carbon dioxide (CO ₂), water fog
Unsuitable Extinguishing Media	Do not use a solid/high-volume water jet directly on the product; use water only as a fog to cool nearby containers
Specific Hazards Arising from the Product	Flammable liquid; vapours may form explosive mixtures with air; combustion may produce oxides of carbon and other toxic/irritant fumes
Special Protective Equipment for Firefighters	Self-contained breathing apparatus (SCBA) and full protective clothing for firefighters

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Precautions	Eliminate all ignition sources and avoid sparks, ensure adequate ventilation, evacuate non-essential personnel for major spills, and wear appropriate PPE
Environmental Precautions	Prevent entry into drains, waterways and soil
Methods for Containment & Cleanup	Minor spills: absorb with sand, sawdust or other inert absorbent and collect in labelled drums for disposal by a licensed contractor. Major spills: dike the area, transfer to empty drums, and arrange disposal in accordance with local regulations

SECTION 7 — HANDLING AND STORAGE

Precautions for Safe Handling	Avoid contact with skin and eyes. Use only in well-ventilated areas with flameproof/explosion-proof equipment. Earth/bond all containers to control static electricity. Keep away from heat, naked flames, sparks and food, drink and clothing.
Conditions for Safe Storage	Store in a cool, dry, well-ventilated area away from heat, naked flames and sparks. Keep container tightly closed at all times.
Incompatible Materials	Oxidizing agents, alkaline materials and strong acids

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredient	Exposure Limit	Source
Xylene	50 ppm (TWA)	Manufacturer data / ACGIH TLV
n-Butyl Acetate	150 ppm (TWA) / 200 ppm (STEL)	Manufacturer data / ACGIH TLV
Aromatic Hydrocarbon Mixture	19 ppm (TWA)	Manufacturer data
Iso-Butyl Alcohol	50 ppm (TWA)	Manufacturer data / ACGIH TLV



Ingredient	Exposure Limit	Source
Methoxy Propyl Acetate	100 ppm (TWA)	Manufacturer data / ACGIH TLV

Engineering Controls	General mechanical ventilation or local exhaust ventilation should be used to keep vapour concentrations below exposure limits; ventilation equipment should be explosion-proof
Eye / Face Protection	Chemical safety goggles or face shield
Skin Protection	PVC or nitrile chemical-resistant gloves; protective clothing as required
Respiratory Protection	Half-face respirator fitted with an organic vapour cartridge; use a NIOSH/EN-approved respirator if ventilation is inadequate

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Coloured liquid (clear coat)
Odour	Solvent odour
pH	Not applicable
Initial Boiling Point & Range	118°C
Flash Point	30°C (closed cup)
Flammability (Solid/Gas)	Flammability limits: 1 – 8% by volume in air
Relative Density	1.23
Solubility in Water	Low
VOC Content	42.1% by weight (volatile content)

SECTION 10 — STABILITY AND REACTIVITY

Reactivity	No specific reactivity data available
Chemical Stability	Normally stable under recommended storage conditions
Possibility of Hazardous Reactions	None known under normal conditions of use
Conditions to Avoid	Heat, sparks, open flame, direct sunlight and other ignition sources
Incompatible Materials	Oxidizing agents, alkaline materials and strong acids
Hazardous Decomposition Products	Oxides of carbon and other toxic/irritant fumes on combustion



SECTION 11 — TOXICOLOGICAL INFORMATION

Acute Toxicity — Oral	Slightly toxic (product not tested as a whole). Component data: n-Butyl Acetate LD50 (oral, rat) 6500 mg/kg; Methoxy Propyl Acetate LD50 (oral, rat) >5155 mg/kg; Xylene and Aromatic Hydrocarbon Mixture LD50 (oral, rat) >2000 mg/kg; Iso-Butyl Alcohol LD50 (oral, rat) 2460 mg/kg. Main hazard of ingestion is aspiration into the lungs, causing chemical pneumonitis.
Acute Toxicity — Dermal	Component data: Iso-Butyl Alcohol LD50 (dermal, rabbit) 4240 mg/kg; Xylene, n-Butyl Acetate and Aromatic Hydrocarbon Mixture LD50 (dermal) >2000 mg/kg; Methoxy Propyl Acetate LD50 (dermal) >2000 mg/kg
Acute Toxicity — Inhalation	Harmful by inhalation. Component data: Xylene LC50 (inhalation, rat, 4h) >5 mg/L; Iso-Butyl Alcohol LC50 (inhalation, rat, 4h) 8000 mg/L; Methoxy Propyl Acetate LC50 (inhalation, rat, 4h) >37500 mg/L
Skin Corrosion / Irritation	Irritating; causes redness and a burning sensation. Prolonged or repeated skin contact may cause dermatitis.
Serious Eye Damage / Irritation	Irritating; causes redness and a burning sensation
Reproductive Toxicity	Prolonged or repeated overexposure to the solvent components may affect the central nervous system, liver, urinary, blood-forming, cardiovascular and reproductive systems

SECTION 12 — ECOLOGICAL INFORMATION

Ecotoxicity	Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment
Persistence & Degradability	No data available
Bioaccumulative Potential	No data available
Mobility in Soil	No data available
Other Adverse Effects	None known

SECTION 13 — DISPOSAL CONSIDERATIONS

Disposal Methods	Dispose of this material and its container as hazardous waste in accordance with local, state and national regulations. Do not pour unwanted product down the drain. Keep unwanted material in sealed containers for disposal via a licensed hazardous waste contractor.
Contaminated Packaging	Empty containers may retain product residue; leave open in a well-ventilated area to dry before recycling steel containers through an approved programme. Do not reuse empty containers. Disposal requirements for empty containers may vary by local authority – check locally.



SECTION 14 — TRANSPORT INFORMATION

UN Number	UN 1263
UN Proper Shipping Name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
Transport Hazard Class(es)	Class 3 – Flammable Liquid
Packing Group	III
Environmental Hazards	No (not classified as a Marine Pollutant for transport based on available data)
Special Precautions for User	Keep away from sources of ignition; Hazchem Code 3[Y]E; transport in accordance with applicable dangerous goods regulations (ADR/IMDG/IATA as applicable)

SECTION 15 — REGULATORY INFORMATION

This product is classified as a hazardous chemical under India's Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, and is subject to applicable Bureau of Indian Standards (BIS) and GHS-based classification and labelling requirements. Where exported, the product is also subject to the GHS implementing regulations of the destination market (e.g. EU CLP, OSHA HazCom in the United States, or other regional equivalents), as applicable.

Abbreviations: LD50 = Lethal Dose, 50%; LC50 = Lethal Concentration, 50%; TLV = Threshold Limit Value; TWA = Time-Weighted Average; STEL = Short-Term Exposure Limit; ppm = parts per million; GHS = Globally Harmonized System; PBT = Persistent, Bioaccumulative and Toxic; vPvB = very Persistent, very Bioaccumulative; SCBA = Self-Contained Breathing Apparatus; PPE = Personal Protective Equipment