



Polymers... beyond imagination

THERMSHIELD

Product description:

Thermshield is a **Single-Pack**, self-priming, high temperature resistant coating based on Grafted Copolymer Technology.

Thermshield grades:

- 1) Thermshield - up to 300°C
- 2) Thermshield - up to 600°C

Product highlights:

- Excellent Resistance to high Temperature
- Excellent Resistance to Oxidation
- Excellent Resistance to U V Radiation
- Excellent Resistance to Chemical Attack
- Excellent Scratch & Abrasion Resistance

Recommended use:

On steel items exposed to high temperatures, e.g. exhaust pipes, engine parts, silencers, etc. Thermshield offers excellent aging & weathering resistance coupled with resistance to chemicals and is used to protect the metal components & structures in the most aggressive conditions at elevated temperatures.

Film thickness and spreading rate

Film thickness, dry (μm) (DFT) - 35-40 Microns per coat
Theoretical spreading rate (m^2/liter) - 5- 5.5 per coat



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Performance properties: (At 80-100 microns DFT)

Sr. No.	Performance Test	ASTM STD.	Actual
01	Scratch Hardness (4.2 KG)	D – 7027	No film crack
02	Conical mandrel (4 mm)	D – 522	No film cracking or crazing
03	Impact test	At 20cm/500gm with ball of 12.7mm	No film crack
04	Adhesion	D – 3359	No Peel-Off
05	Salt Spray Resistance 1000 HRS (At 80-100 Microns DFT)	B - 117	No Surface Deterioration & corrosion.
06	Thermal Stability For 100 Hrs Heating	D – 2243	No effect on coating surface.
07	Resistance to 10% H ₂ SO ₄ Resistance to 20% NaOH	Immersion test for 24 hrs.	No effect on coating surface
08	Resistance to Industrial water	Immersion test for 24 hrs.	No effect on coating surface
09	Resistance to lubricating oil	Immersion test for 24 hrs.	No effect on coating surface
10	UV stability	ASTM D4587-05	No Surface Deterioration

Surface conditions:

Temperature of the substrate - Minimum 3°C above the dew point of the air temperature

Relative humidity- Maximum 80 % measured in the vicinity of the substrate.

Ventilation - Good ventilation is required in confined areas

Do not use heated air until the solvents (Thinner) have evaporated (flashed off) from the paint film to avoid surface drying and solvent entrapment. During application and the initial drying of the coating, the object should not be exposed to high humidity as this can result in loss of gloss.

Surface preparation:

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504



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Application methods:

Spray -Use Airless Spray or Air Assisted Spray

Brush- Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.

Roller- May be used for small areas, however when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness.

Application data

Mixing ratio - Single Pack Ready to Use System. No Mixing of Two Components

Pot life - No Pot Life (Can be used for six months after opening the Container) Viscosity if needed can be adjusted with special solvent THINNER SK13

Guiding data airless spray:

Pressure at nozzle- 15 MPa (150 kg/cm², 2100 psi)

Nozzle tip -0.38 - 0.46 mm (0.015 - 0.018").

Spray angle - 40-60°

Recommended DFT: 80-100 microns

Recommended Coats: 2-3 coats

Drying time:

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with: * Good ventilation (Outdoor exposure or free circulation of air) *

Substrate temperature	5°C	10°C	23°C	40°C
Surface dry (dry to handle)	45 mints.	35 mints	20 mints.	15 mints.
Hard dry	24 Hrs.	24 Hrs.	12 Hrs.	12 Hrs.
Dry to recoat, minimum	30 minutes minimum (for testing purpose- 24 hrs)			

Storage:

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

Handling:

Handle with care. Stir well before use. Do not leave the container open after use. Make it air tight.

Packing size:

20 liters Metal Containers



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Health and safety:

Please observe the precautionary notices displayed on the container& in our MSDS. Use under well ventilated conditions. Do not breathe or inhale mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately. For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.

Disclaimer:

The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product can be used under conditions beyond our control, we can only guarantee the quality of the product itself. We also reserve the right to change the given data without notice. Minor product variations may be implemented in order to comply with local requirements.

ISSUED ON 14 NOVEMBER 2019 BY SK FORMULATIONS INDIA PVT.LTD.

THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED.

Prepared by

Approved by

Master copy stamp

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