

THERMOSHIELD

HEAT RESISTING PROTECTIVE COATING



DESCRIPTION

ThermoShield paint is a synthetic solvent based protective coating specifically formulated to provide corrosion protection metal surfaces subjected to heat such as stoves, barbecue grills, radiators, fire pits, automotive parts, heating equipment and other heated metal surfaces.

RECOMMENDED FOR

Ideal as a top finish for steel and iron surfaces in interior and exterior settings. For the exterior of barbecue grills, chimneys, stoves, fire pits, radiators, automotive parts, etc.

KEY FEATURES

- Resistant to temperatures up to 800 °C
- Anticorrosive
- Direct to metal application
- High solids coating
- Cures at ambient temperature
- Available in black and silver color

PHYSICAL PROPERTIES

Solvent Type	Aromatic and non-aromatic hydrocarbons	
Finish type	Flat	
Binder type	Silicone resin	
Mixing ratio by volume	100 parts base to 10 parts hardener	
Pot life	2 hours	
Touch dry	1 hour	
Dry to service	24 - 48 hours depending on application conditions	Based on ASTM D1640
Full cure	7 days	
Forced drying temperature	Maximum 35 °C	
Heat resistance	Black: 650°C Silver: 800°C	
Flash point	40 °C	
Adhesion to steel	5B	Based on ASTM D 3359B
Corrosion category	C4	ISO 12944, ASTM B117, ASTM D4585
Volume solids	68% (black), 38% (silver)	Calculated
Weight solids	85% (black), 47% (silver)	Calculated
Density (A + B)	1.5 g/cm ³ (black), 1.1 g/cm ³ (silver)	
Spreading Rate (black)	Approximately 6-7 m ² /Kg/coat 1 coat recommended	
Spreading Rate (silver)	Approximately 8-9 m ² /Kg/coat 1 coat recommended	
Recommended wet film thickness per coat	100 microns	
Thinner	Not recommended	
Color	Black and silver	

SURFACE PREPARATION

Steel Surface Conditions

The steel shall preferably be Rust Grade A or B according to ISO 8501-1. The use of steel with Rust Grade C requires tighter inspection of surface profile after blasting as well as of possible salt contamination. The final steel condition including welds and edges shall conform to preparation grade P2, ISO 8501-3: "Preparation of steel substrates before application of paints and related

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products - Visual assessment of surface cleanliness". The steel surface shall be thoroughly prepared so that the coating achieves an even distribution at the specified nominal dry film thickness and has adequate adhesion.

General Preparations

In order to obtain best performance, abrasive blast cleaning is recommended.

Abrasive blasting/abrasive sweep blasting: Before blasting any deposits of grease or oil must be removed from the steel surface with a suitable detergent followed by high pressure fresh water cleaning.

Minor spots of oil/grease may be cleaned with thinner and clean rags - avoid smearing out the contamination.

Possible alkali weld deposits, chemicals used for testing of welds, soap residues from the pressure testing must be removed by fresh water hosing. Abrasive blasting to Sa 2½ (ISO 8501-1:2007) with a sharp-edged surface profile corresponding to Rugotest No. 3, BN10a-b, Keane-Tator Comparator, 2.0 G/S, 2 S, or ISO Comparator, Medium (G).

Spot-repairs

Clean damaged areas thoroughly by power tool cleaning to minimum St 3 or by abrasive blasting to minimum Sa 2, preferably Sa 2½. As an alternative, water jetting to minimum Wa 2 (ISO 8501-4:2006) may be used or according to specification. Feather edges to sound and intact areas. Brush off loose material. Touch up to full film thickness.

STEEL RUST GRADES

RUST GRADES BASED ON ISO 8501-1	UNBLASTED	1 BLAST CLASS	2 BLAST CLASS	2.5 BLAST CLASS	3 BLAST CLASS
RUST GRADE A Steel surface largely covered with adherent mill scale but little, if any, rust.					
RUST GRADE B B Steel surface which has begun to rust and from which the mill scale has begun to flake.					
RUST GRADE C Steel surface on which the mill scale has rusted away or can be removed by scraping, but with slight pitting visible under normal vision.					
RUST GRADE D Steel surface on which the mill scale has rusted away and on which general pitting is visible under normal vision					

APPLICATION CONDITIONS

Do not apply at temperatures below 5 °C or when rain is expected.

APPLICATION METHOD

1. Mix the base component well, make sure there is no sedimentation at the bottom of the container

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2. Add the hardener component to the base component and mix well
3. Add some of the mix back into the hardener component bottle, close the bottle, shake it and empty in the mix
4. Remix well for a few minutes
5. Apply using a brush, roller and/or spray

Not recommended for metals other than steel or iron, such as galvanized steel, stainless steel, aluminum etc. Do not expose to open flame, or to surfaces with direct contact to food. This product is designed as direct-to-metal, do not prime before applying.

When exposed to heat for the first time only, minor smoke and odor will emanate from the coating.

PACK SIZE

	Base Black	Base Silver	Hardener
1 US Quart (kg)	1.05	0.95	0.09
1 US Gallon (kg)	4.2	3.8	0.36

SHELF LIFE

24 months from the date of production.

STORAGE AND HANDLING

Care should be taken to avoid spillage. Product should be stored in a dry area and protected from freezing. Extreme temperatures may cause paint to become unusable. For example: freezing and thawing may cause paint to gel, and high heat may cause solid skin to form.

SAFETY

Use under well ventilated conditions. Do not breathe or inhale spray mist or sanding dust. Avoid skin contact; spillage on the skin should immediately be removed with suitable cleanser, soap and water. In case of eye contact, flush immediately with water for at least 15 minutes and seek medical attention immediately. If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

CLEANING

Remove as much leftover product as possible from the application equipment before cleaning. Clean equipment immediately after use with paint thinner. Do not empty product into drains or watercourses.

TECHNICAL ASSISTANCE

Available through your local COLORTEK® Design Center or through your COLORTEK PAINTS® authorized distributor. For the location of the retailer nearest you, email us at info@colortek.eu or check our website www.colortek.eu.

DISCLAIMER

Product batches are subject to stringent quality control checks in conformity with ISO 9001:2015, Certificate CH12/1128.

Applying this product at a high film thickness may lead to surface peeling once heated; it is recommended to maintain a wet-film thickness of 100 microns.

The information submitted in this manual is correct to the best of our knowledge & experience. No liability whatsoever can be accepted on the basis of the information supplied herein.

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