
PRODUCT DESCRIPTION A one component, solvent based, high temperature coating based on air drying/baking silicone binder in a aluminium

INTENDED USES For the protection of steel from corrosion on areas including flare stacks, kilns, flues, furnaces, muffler, exhausts, hot piping, stacks & other steel surfaces at elevated temperatures.

SpecHeat Silicone 650 Aluminium will withstand continuous dry temperatures of 650°C and temperature surges of 700°C

- CHARACTERISTICS**
- Maximum thickness which can be applied in a single coat without subsequent blistering on heating is 40 microns dft
 - Used for internal and external protection of steel surfaces
 - Excellent flexibility
 - Excellent abrasion and weathering resistance
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PRODUCT INFORMATION	Colour	Aluminium
	Finish	Matt
	Density	1.10 kg/litre
	Volume Solids	28%
	Typical Film Thickness	25-50 microns dry (100 WFT per coat)
	Theoretical Coverage	11.20 m ² /litre at 25 microns dft, allow loss factors
	Method of Application	Spray
	Number of Coats	Two coats should be applied to achieve typical DFT and pinhole free coating
	Temperature Resistance	Dry continuous - 650°C* Intermittent - 700°C
	V.O.C.	N/A
	Curing	This coating will air dry but must be heated to 200°C for 60 minutes to obtain full cure before use.

Drying Information	10°C	20°C	25°C	40°C	50°C
Touch Dry	-	-	1 hr.	-	-
Hard Dry	-	-	16 hrs	-	-

Overcoating Data – See Limitations	10°C	15°C	25°C	30°C	50°C
Substrate Temp.	10°C	15°C	25°C	30°C	50°C
Minimum	8 hrs.	6 hrs.	4 hrs.	2 Hrs.	-
Maximum	-	-	48 hrs	-	-

Note a curing temperature below 10°C is not recommended, adequate ventilation should be maintained during application and curing

SURFACE PREPARATION

Accumulated dirt and soluble salts must be removed. Dry bristle brushing will normally be adequate for accumulated dirt. Soluble salts should be removed by fresh water rinsing. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning and Mechanical Preparation –Steel

Abrasive blast clean to SA 2½ (ISO 8501-1:2007) or SSPC-SP6. If oxidation has occurred between blasting and application of Silicone 650, the surface should be re-blasted to the specified visual standard.

Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

A surface profile of 25-50 microns is recommended

Hand or Power Tool Preparation

Any coating on the surface must be removed prior to the application of Silicone 650. Hand or power tool clean to a minimum of St3 (ISO 8501-1:2007) or SSPC-SP3.

Note, all scale must be removed and areas which cannot be prepared adequately by chipping or needle gun should be spot blasted to a minimum standard of Sa2½ (ISO 8501-1:2007) or SSPC-SP6. Typically this would apply to C or D Grade rusting in this standard.

Primed Surfaces

Silicone 650 is suitable for application to unweathered steelwork freshly coated with zinc silicate shop primers.

If the zinc shop primer shows extensive or widely scattered breakdown, or excessive zinc corrosion products, overall sweep blasting will be necessary. Other types of shop primer are not suitable for overcoating and will require complete removal by abrasive blast cleaning.

Weld seams and damaged areas should be cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6.

Aluminium Metal Spray

Metal sprayed surfaces should be fresh, clean and free from moisture or surface contamination

APPLICATION

Mixing	Material is supplied in steel containers. This is a one component product and does not require a hardener.		
	Agitate/stir the product well before use to ensure a homogeneous mix and no settlement of pigments		
	The temperature of the mixed product should preferably be above 10°C. Higher temperatures result in reduced sag resistance and faster cure.		
Thinner	SpecHeat Thinner	0-20% depending on application	
Airless Spray	Recommended	Tip range 11-17 Thou. Pressure at the tip should not be less than 170 bar (2500 PS)	
Air Spray	Recommended	Gun	Pressure/Gravity Feed
		Fluid Tip	1.1 mm to 1.6 mm
Brush/Roller	Suitable	Typically 15-20 microns can be achieved	
Work Stoppag	Thoroughly flush all equipment with SpecHeat Thinner. All unused material should be stored in tightly closed containers. Partially filled containers may show surface skinning and/or a viscosity increase of the material after storage. Material should be filtered and viscosity re-adjusted before used.		
Clean Up	Clean all equipment immediately after use with SpecHeat Thinners. It is good working practice to periodically flush out the spray equipment during the course of the working day. Frequency of cleaning will depend upon the amount sprayed, temperature and elapsed time, including delays.		

Environment		Surface Temperature	Ambient Temperature	Relative Humidity
	Minimum	5°C*	5°C	No lower limi
	Maximum	45°C*	45°C	100%

* Higher temperatures result in reduced sag resistance and faster cure

LIMITATIONS

- Do not exceed the recommended dry film thickness
- When using high heat coatings over Inorganic Zinc Primer, the products should be applied in strict accordance with film thickness specifications, since application of excessive thicknesses may cause blistering. Determine that the inorganic zinc primer is thoroughly cured prior to application of the high heat coating by following the curing instructions given on the relevant product technical data sheet
- Silicone 650 is not suitable for exposure in acid or alkaline environments
- Overcoating information is given for guidance only and is subject to local climate and environmental conditions. Consult a Speccoats™ representative for specific recommendations
- Unmixed material (in closed containers) should be maintained in protected storage in accordance with information given in the STORAGE section of this data sheet.
- Technical and application data herein is for the purpose of establishing a general guideline of the coating application procedures.
- Test performance results were obtained in a controlled laboratory environment and Speccoats™ makes no claim that the exhibited published test results, or any other tests, accurately represent results found in all field environments. As application, environmental and design factors can vary, due care should be exercised in the selection and verification of the performance and use of the coating

UNIT SIZE

1, 5 & 20 Lt

STORAGE

Shelf Life 12 months minimum at 25°C

Subject to inspection thereafter. Store in dry conditions out of direct sunligh away from source of heat or ignition

IMPORTANT NOTE

Whilst we endeavour to ensure that all advice we give about the product is correct, the information given in this data sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so entirely at his own risk. As conditions of use, method of application and suitability of the substrate prior to painting are beyond our control, no guarantee is implied by the recommendations contained herein. We therefore do not accept any liability whatsoever or howsoever arising from the performance of this product or for any loss or damage arising out of the use of this product. The information contained in this sheet is liable to modification from time to time in the light of experience and ongoing product development programmes. It is the user's responsibility to ensure that this sheet is current prior to using the product