

Product and Technology Description

MCU-Aluminium SX HH is a heat resistant, single component protective coating that is filled with aluminium pigments. It is heat resistant up to 600 °C and provides outstanding barrier protection against corrosive elements.

MCU-Aluminium SX HH can be used as a primer/finish coat on itself, or as finish coat over MCU-Zinc HH.

Technology Features

- | | |
|--|---|
| 1 component | No cracking, flaking, or peeling |
| No pot life limitations | Good chemical resistance |
| No induction time restrictions | High resistance to blistering |
| Apply in 30 % - 85 % relative humidity | Good abrasion resistance |
| Suitable for use in temperatures up to 600°C | Exceptional wetting out properties - good flow into pitting |
| Excellent adhesion to most substrates | Excellent protection against corrosion |

Areas of Use

Substrates:

Ferrous metals – mild steel / cast iron
Galvanised metals

Possible applications:

Smoke stacks
Steel ovens
Pipes / valves
Heat exchangers etc

Specifications

- | | | | |
|----------------|--------------|--|-------------------------|
| Resin type: | Silicone | Theoretical coverage: | 25 µm DFT: 16.8 m2/l |
| Pigment type: | Aluminium | Recommended film thickness: | |
| Sheen: | Medium/gloss | Wet: | 48 - 60 µm -no thinners |
| Colours: | Aluminium | Dry*: | 20 - 25 µm |
| Volume solids: | 42.0% ± 2.0% | *Don't exceed 70µm WFT (30 µm DFT) per layer | |
| VOC: | 495 g/l | | |

Shipping

- Shelf life: 15 months from date of manufacture if stored unopened between 5 °C and 25 °C in a dry cool place
Flash point: 38.5 °C
Density: 1.18 ± 0.12 kg/l
UN proper shipping name: UN 1263, PAINT, Class 3, Packaging Group III

Drying Times and Temperatures

At 60 % Relative Humidity*	Tack Free	Recoat Min - Max	Full Cure @ 250 °C
10 °C	45 – 60 minutes	1 - 7 days	30 minutes
22°C	20 – 45 minutes	1 - 7 days	30 minutes
35 °C	15 minutes	1 - 7 days	30 minutes

* or baking minimum 1 hour at 200 °C and flash off 60 minutes before recoating
DO NOT use with MCU-Quickcure

Surface Preparation

Ferrous Metal

Use SSPC-SP1 solvent cleaning and/or MCU-Ecodegreaser to remove oil and grease or other contaminants prior to surface preparation.

Prepare surfaces for non-immersion or atmospheric service projects by ISO 8504-2 methods to ISO 8501-1 SSPC-SP6/ NACE No.3 (Sa 2) Commercial Blast Clean finish, visual standard SSPC vis 1, or by SSPC 12/Nace 5.0 High or Ultra High pressure water jetting to WJ 4M, visual standard SSPC vis 4/Nace vis 7, or by SSPC-TR2/Nace 6G198 Wet abrasive blast cleaning methods to WAB 6M, visual standard SSPC vis 5/Nace vis 9 Wet commercial blast clean finish.

For minimum surface preparation, use conscientious hand and power tool cleaning methods in accordance with ISO 8504-3/ SSPC-SP 2 and 3 to remove corrosion and loose or failing paint to ISO 8501-1/SSPC-SP2 and SSPC-SP3 (St 2), visual standard SSPC vis 3. Feather the edges of sound, existing paint back to a firm edge.

Minimum required surface profile - 25-50 µm.

Corten Steel

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods. Supplement SSPC-SP 12 LPWC with ISO 8504-3/SSPC-SP2 or SSPC-SP3 hand / power tool cleaning where areas show excessive corrosion. Use SSPC-SP1 Solvent Cleaning to remove oil and grease.

Galvanised Metal

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No.5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanised surface preparation with ISO 8504-3/SSPC-SP2 and SSPC-SP3 Hand and Power Tool Cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanised surface cleaning with mechanical abrasion to impart surface profile and support mechanical adhesion.

Best Practice

Surfaces must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application. Areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard

Consult the referenced standards, SSPC-PA1 and your MCU-Coatings Representative for additional information.

MCU-Aluminium SX HH can be applied by brush, roll, airless spray and conventional spray methods.

Application

Follow proper mixing instructions before applying.

Maximum heat resistance: 600 °C and heat up by steps of 100°C per hour.

Mixing

Material temperature must be 3 °C above the dew point before opening and agitating.

Power mix thoroughly prior to application.

Do not keep under constant agitation.

Reducer

Typically not required. If necessary, thin up to 10% with MCU-Thinner AHH - see Technical Data Sheet for additional information.

Brush/Roller

Brush:	Natural fibre
Roller:	Natural or synthetic fibre cover
Nap:	5 to 10 mm (higher nap, thicker coat)
Core:	Phenolic

Airless Spray

Pump Ratio:	28-40 : 1
Pressure:	170-200 bar (2465 – 2900 psi)
Hose:	5 to 10 mm (1/4" to 3/8")
Tip Size:	0.011 - 0.017
Filter Size:	60 mesh (250 µm)

Conventional Spray

Fluid nozzle:	1.3 - 1.7 mm
Air pressure:	3.1 - 5.2 bar (45 – 75 psi)
Hose:	12 mm ID; Max 16 metre

Clean-up

MCU-Thinner AHH. If MCU-Thinners are not available, use MEK, MIBK, Xylene, a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean-up only. Do not add unauthorised solvents to MCU-Coatings.

Application Conditions

Temperature: ambient temp. to 50 °C

This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and 3 °C above dew point.

Relative humidity: minimum 30% maximum 85%

Storage

Store off the ground in a dry, protected area in temperature between 5 °C to 25 °C. Containers must be kept sealed when not in use. Use a solvent float to reseal partially used containers.

Safety Precautions

This product is for industrial and professional use only. Consult the Safety Data Sheet.

Warranty

MCU-Coatings warrants its products to be free from defects in materials. MCU-Coatings sole obligation, and Buyer's exclusive remedy in connection with the products, shall be limited, at MCU-Coatings' option, is to either replace the products not conforming with this warranty, or to credit the Buyer's account with the invoiced amount of the non-conforming products. Any claim under this warranty must be made by Buyer to MCU-Coatings in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf-life, or six months from the delivery date, whichever is earlier. Buyer's failure to notify MCU-Coatings of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

MCU-Coatings makes no other warranties concerning the products. No other warranties, whether expressed, implied

or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall MCU-Coatings be liable for consequential or incidental damages.

Any recommendations or suggestions relating to the use of the products made by MCU-Coatings, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore the Buyer must satisfy itself as to the suitability of the products for its own particular use, and it shall be deemed that the Buyer has done so at its sole discretion and risk. Variations in environment, changes in procedures of use or extrapolation of data may cause unsatisfactory results.

Limit of Liability

MCU-Coatings' liability on any claim of any kind, including claims based upon MCU-Coatings' negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allowable for the products or part thereof that gave rise to the claim. In no event shall MCU-Coatings be liable for consequential or incidental damages. Published Technical Data Sheets are subject to change without notice. Contact your MCU-Coatings representative for the most up-to-date Technical Data Sheets.