ALLTER

ALTERNATE CORROSION PREVENTION SYSTEMS

Allter-Therm™ 650 CUI

PRODUCT DATA SHEET

Selection and Specification Data

Generic Type	Pure Inorganic ceramic polymer (inert multi-polymeric matrix)
Product Description	Allter-Therm™ 650 CUI is a high performance single-component pure inorganic coating, designed to protect carbon- and stainless steel substrates under insulation where an excellent wet/dry cycling resistance at elevated temperature is required. The coating complies to the NACE SP0198-2017 classification, inert multi-polymer matrix coatings for corrosion under insulation (CUI) in both cryogenic and elevated temperature applications, is fully ambient curing and can withstand temperatures from -196°C up to 650°C (-321 up to 1202°F). Application examples are insulated piping, process vessels, storage tanks, heat exchangers, stacks, ductwork, steam pipes and other equipment in various industries such as in petrochemical facilities, chemical plants, Offshore, power plants, refineries etc.
Features	● Outstanding dry/wet cycling resistance ● Single component, easy to use coating ● Complies to NACE SP0198-2017 (CS-6 and SS-5 systems) ● Self-priming on carbon-and stainless steel substrates ● Service tolerant and UV resistant (can also be used for atmospheric services) ● Prevents stress corrosion cracking (SCC) of stainless steels ● Service temperature from -196 up to 650°C (-321 up to 1202°F) ● Can be applied on hot substrates up to max. 260°C (500°F) ● Can be applied with Airless, conventional spray and brush & roller ● Can be used for in shop (OEM) as well maintenance applications ● No need for heat curing
Color	Light and dark grey
Finish	Eggshell
Primer	Self-priming

Allter-Therm™ 650 CUI

Dry Film Thickness	125-150micron (5-6 mils) per coat. Two coats are recommended for maximum system performance. Minimum DFT per coat is 50micron (2 mils). Maximum DFT per coat is 150micron (6 mils). Maximum system dry film thickness 375micron (15 mils)
Volume Solids	64% ±2%
Theoretical Coverage Rate	5.12m^2/l at 125micron DFT (208.6 ft^2/gal at 5 mils) 4.26m^2/l at 150micron DFT (173.6 ft^2/gal at 6 mils)
VOC	342g/l (2.7 lbs/gal)
Temperature Resistance	-196 up to 650°C (-321 up to 1202°F)
Topcoats	None

Substrate and Surface Preparation

General	Remove all dirt, grease, mill scale, loose rust and any other contaminants that can reduce adhesion according SSPC-SP1 solvent cleaning, followed by the recommended substrate preparation as listed below.
Insulated or atmospheric exposed carbon steel	For maximum system performance, abrasive blasting according to Sa2½ (ISO 8501-1) with a 30-50micron (1.2-2mils) surface profile (Rz). For maintenance or when blasting is no option, SSPC-SP11 with a minimum 25micron (1 mil) surface profile (Rz) may be an alternative.
Insulated or atmospheric exposed stainless steel	For maximum system performance, abrasive blasting according to SSPC-SP16 with a 30-50micron (1.2-2mils) surface profile (Rz), using a non-metallic inert abrasive media such as aluminum oxide or garnet. For maintenance or when blasting is no option, SSPC-SP11 with a minimum 25micron (1mil) surface profile (Rz) may be an alternative.

Mixing and Thinning

Mixing	Use low speed mechanical mixing equipment. Keep the material mixed or regularly agitated during spraying. The material is reactive with moisture.

Thinning		10-60°C (10-50°F)	60-150°C (50-302°F)	150-260°C (302-500°F)
	Airless:	2-5% Thinner 21	5-10% Thinner 21	-
	Conv. spray:	4-8% Thinner 100	6-10% Thinner 100	8-12% Thinner 100
	Brush/roller:	-	0-10% Thinner 200	8-12% Thinner 200

Application Equipment

General	The following information can be used as a guideline to apply the coating system. Site conditions may require modifications in spray pressure and tip sizes.
Conventional spray	Pressure pot equipped with dual regulators, a 3/8”ID material hose, a 1.8-2.2mm. (0.070-0.086”) fluid tip and 2.1 bar (30psi) fluid pressure.
Airless spray	A minimum 30:1 pump ratio, with a minimum 3/8” ID material hose, 0.015-0.021” tip size and 160-200 bar (2320-2900 psi) pressure. Remove all filters.

Brush and roller Use a natural bristle brush and apply the material in full strokes. Avoid re-brushing. If rolled, use a short nap roller with solvent resistant core. Avoid rerolling.

Application Conditions

	Condition	Material	Surface	Ambient	Rel. Humidity
	Minimum	13°C (55°F)	10°C (50°F)	10°C (50°F)	35%
	Maximum	32°C (89°F)	260°C (500°F)	50°C (122°F)	85%
	This material requires the substrate temperature to be 3°C (5°F) above dew point				

Curing Schedule				
	Temperature	**Touch dry**	**Dry to recoat**	**Dry to handle**
	10°C (50°F)	6 hours	24 hours	36 hours
	23°C (73°F)	2 hours	6 hours	24 hours
	38°C (100°F)	1 hour	4 hours	16 hours
	130°C (260°F)	N/A	15 minutes	N/A
	Note: Drying times can vary upon different environmental conditions. Material should be applied within the supplied parameters to ensure drying and recoat times are respected. Material is fully curing under ambient conditions and does **not** require heating to obtain its mechanical and corrosion protective properties. This material has an unlimited recoat time, even after exposure at elevated temperatures.			

Cleanup and Safety Information

Cleanup Use Thinner 21

Safety This material is for professional use only. Please observe the precautionary information on the safety data sheets (SDS) and label on the containers before using this material. Use of this material must be kept in compliance with local health, safety and environmental conditions and regulations.

Packaging, Handling and Storage

Shelf life Minimum 12 months at 23°C (73°F)

Storage temperature and humidity 4 - 50°C (39 -122°F).
85%.

Storage Material should be stored indoors, well ventilated and away from sources of heat and ignition.

Shipping weight 10 litres (19.1 kg) 2.64 Gallon (42.1 lbs)

Flash point (ISO 1523) 30°C (86°F)

DATE: Januari 2020

DISCLAIMER: *Allter Coatings warrants that the product(s) represented within conform(s) to its/their chemical and physical description and is appropriate for the use as stated on the respective technical data sheet when used in compliance with Allter Coatings written instructions. Since many installation factors are beyond the control of Allter Coatings the user is obligated to determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Allter Coatings liability is stated in the standard terms and conditions of sale. Allter Coatings makes no other warranty either expressed or implied. All information contained in the respective technical data sheet(s) should be used as a guide and is subject to change without notice. This document supersedes all previous revisions. Please see revision date on the left. Allter® is a registered trademark.*