



Lumeros HR 123

Single Pack High Performance Aluminium Coatings

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Product Description

High performance aluminium coatings based on silicone resin for protection of steel at elevated temperatures between 250°C and 600°C. We offer three different qualities of Lumeros depending on temperature ranges - HR/47, 123HR & HR/143

Usage Areas

Furnace equipment, Reaction Vessels, Hot metal Stacks, Kilns, Flues, Exhaust systems, Hot Pipes and similar areas exposed to dry heat attack.

Product Data

Composition	Silicone Resin and Aluminium
Volume Solids	30 ± 2%
Application Method	Brush or Conventional Spray
Recommended DFT	15 - 20 µ per coat
Theoretical Spreading Rate	HR/47 & 123 HR : 7.0 - 9.0 m ² /ltr HR 143 : 16.0 - 21.0 m ² /ltr
Colour	Aluminium
Finish	Bright Metallic

Practical Coverage : Dependent on-site condition and transfer losses due to substrate design, profile, wind, heights, application method, painter's skill etc.





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		Systems compatibility can be provided on request to the Technical Service Team		
		Coats	Generic Systems	Compatible Products
Typical Coating Systems	Primer	Inorganic Zinc, Silicone Aluminium Paint		Zinc Anode 304, Lumeros HR 47*, Lumeros HR 123**, Lumeros HR 143***
	Mid Coat	-		-
	Top Coat	Silicone Aluminium Paint		Lumeros HR 47*, Lumeros HR 123**, Lumeros HR 143***

*For temp ranging 250°C - 400°C, ** For temp ranging 250°C - 500°C, ***For Temp ranging 400°C - 600°C

Pack size		UOM	Part A	Part B	Total
	Volume		Lt/Kg	4 ltr	4 ltr
				20 ltr	20 ltr

Storage	The paints must be in its sealed original containers and be kept under cover in a dry place with ambient conditions inside closed room until use. The curing agent is sensitive to moisture and hence relative humidity within the room should be maintained preferably at ≤55%. Stacking should not be more than 3 drums/ cartons one above other. DO NOT expose to direct rain/ sunlight. Any deviation to the defined storage condition shall have a negative effect on the shelf life.
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Shelf life	Up to 12 months as long as the sealed original containers are kept under cover in a dry place under normal temperature conditions until use. Note : 1. Storage life @23°C will be extended up to 24 months. Storage at elevated temperatures may reduce shelf life; and hence never exceed maximum room temperature of 40°C. Storage life, thereafter, subject to re-inspection; consult tech-service. 2. It may be noted that higher volume solid material will tend to soft settling on long term storage, and it can be made to a normal homogeneous consistency by use of a slow speed 200-400 rpm power stirrer particularly in the PART A (BASE) container; and this soft settling is not considered as a failure of keeping properties.
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Flash Point	Part A	Part B	Mixed Paint
	25°C	-	25°C

Health & Safety	Please refer to the separate Safety Data Sheet available with detailed information.
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APPLICATION GUIDELINE

Substrate	Steel	
Surface preparation	<p>Steel : Remove grease, oil and other contaminants preferably by using Bison Degreasing Solvent. Blast clean to a minimum of Sa 2^{1/2} Swedish Standard SIS 05 5900 with a surface profile not exceeding 35-40 microns. If blasting is not practical, make full use of mechanical tools along with manual chipping and wire brushing to remove loose rust and scale to St. 2 Swedish Standard SIS 05 5900. Excessive burnishing of steel is to be avoided. Thoroughly dust down all surfaces. The surface should be clean and dry before application of the appropriate primer or HR Aluminium Paint.</p>	
Atmospheric Condition	Ventilation	Suitable air engineering systems, which will ensure reduction of air contaminants and thatto further help regulate the temperature and humidity of the working environment.
	Dew Point	Ensure surface temperature to be more than 3°C over the dew point temperature.
	Humidity	Do not apply when relative humidity rises above 90%.
Mixing	<p>Stir the base thoroughly and then mix base to a homogenous mixture and then add recommended part of catalyst to uniform consistency.</p> <p>NOTE : DO NOT ADD THINNER beyond recommendation as it will reduce mixed VS calling for revised WFT calculations as well as challenges on flow properties.</p>	
Thinner	Thinner 853	





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Application	<p>Stir thoroughly before and occasionally during use.</p> <p>Brush : Apply, without thinning, to the recommended thickness.</p> <p>Conventional Spray : Add maximum upto 5% Thinner 853 depending on conditions. Use any suitable standard equipment at an atomising pressure of 2.8 - 3.5 Kg/cm².</p>																				
Work Stoppage	<p>Ensure to use the mixed paint within pot life as there are no methods to increase working pot life. Keep the working tools and tips free of drying and clogging. Always use fresh material and never add-up to previous mixed paints.</p>																				
Clean Up	<p>Clean all equipment immediately after use with Thinner 853. It is good working practices to flush or clean all the spray equipment periodically. All the surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations.</p>																				
Drying Time	<table border="1"> <thead> <tr> <th data-bbox="414 1012 632 1080">Temperature</th><th data-bbox="632 1012 822 1080">Touch Dry</th><th data-bbox="822 1012 1013 1080">Handle Dry</th><th data-bbox="1013 1012 1235 1080">Hard Dry</th></tr> </thead> <tbody> <tr> <td data-bbox="414 1080 632 1147">10°C</td><td data-bbox="632 1080 822 1147">4 hrs</td><td data-bbox="822 1080 1013 1147">8 hrs</td><td data-bbox="1013 1080 1235 1147">24 hrs</td></tr> <tr> <td data-bbox="414 1147 632 1215">23°C</td><td data-bbox="632 1147 822 1215">2 hrs</td><td data-bbox="822 1147 1013 1215">5 hrs</td><td data-bbox="1013 1147 1235 1215">18 hrs</td></tr> <tr> <td data-bbox="414 1215 632 1282">30°C</td><td data-bbox="632 1215 822 1282">80 min</td><td data-bbox="822 1215 1013 1282">3 hrs</td><td data-bbox="1013 1215 1235 1282">12 hrs</td></tr> <tr> <td data-bbox="414 1282 632 1349">40°C</td><td data-bbox="632 1282 822 1349">40 min</td><td data-bbox="822 1282 1013 1349">2 hrs</td><td data-bbox="1013 1282 1235 1349">10 hrs</td></tr> </tbody> </table>	Temperature	Touch Dry	Handle Dry	Hard Dry	10°C	4 hrs	8 hrs	24 hrs	23°C	2 hrs	5 hrs	18 hrs	30°C	80 min	3 hrs	12 hrs	40°C	40 min	2 hrs	10 hrs
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Over Coating Intervals	<p>MIN</p> <p>Overnight</p>																				





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Curing Time	<p>7 days</p> <p>NOTE : Drying and Curing times are determined under controlled temperatures and at relative humidity below 85%, for the NDFT of the product.</p>
Inspection	<p>Refer SSPC PA2 guidelines for measurement of DFT.</p> <p>Do not conduct any destructive test like peel off/ pull off & high voltage Holiday test unless and otherwise mandatory in the specification.</p> <p>Consult Technical Service team for preparation of QAP (Quality Assurance plan).</p>
Repair Methodology	<p>Clean off loose paints, debris, contaminants and ensure spot repair with available tools as practiced in hand/ power tool cleaning using wire brush/buffing, emery/feathering to smoothen the edges of impaired areas. Use appropriate touch up primer followed by recommended coating system, allowing due over coating interval time to area of 2-3 inches in excess of the spot repaired portion.</p>
Product Characteristics	<ul style="list-style-type: none"> The coating shows fair resistance to acids, alkalis under splash & Spillage and good under mild fumes, outdoor conditions. The coating shows poor resistance to solvents under splash & Spillage and good under mild fumes, outdoor conditions. It shows good resistance to salt under splash & Spillage and very good under mild fumes, outdoor conditions. The coating withstands continuous temperatures up to 250°C - 400°C for HR/47, 250°C - 500°C for 123 HR, 400°C - 600°C for HR/143 without loss of performance. The coating has good flexibility and moderate weatherability with proper undercoat. The coating demonstrates moderate abrasion resistance, ensuring strong protection against wear and surface damage. For heat resistance upto 400°C, Zinc Anode 304 can act as a primer coat which is to be applied on blast cleaned surfaces. It is preferable to measure the actual skin temperature for selecting the right quality of Lumeros HR Paint Coating.
Disclaimer	<p>The information contained within this Data Sheet is based on information believed to be reliable at the time of its preparation. The Company will not be liable for loss or damage howsoever caused including liability for negligence, which may be suffered by the user of the data contained herein. It is the users' responsibility to conduct all necessary tests to confirm the suitability of any product or system for their intended use. No guarantee of results is implied since conditions of use are beyond our control.</p>



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