

ULTRALOK ALUM

TECHNICAL DATA SHEET

ULTRALOK ALUM is two component, UV stable, aluminium metalized, very fast curing polyurea. It has an improved electrical conductivity (antistatic effect) and that due to its special colour does not turn yellow if exposed to sunlight, therefore it does not need an aliphatic topcoat to keep the colour and the aesthetical appearance.

Performance characteristics:

- UV stable.
- Excellent abrasion resistance
- Very fast curing
- Excellent adhesion to a variety of substrates

For more information see the application manual of **ULTRALOK ALUM**.

PRODUCT PROPERTIES

PRODUCT CHARACTERISTICS	
Color	Aluminum effect
Initial hardness	1 hours
Final curing time (90% cured)	2 days
Coverage	2 kg / m ² / Coat

PHYSICAL PROPERTIES*		
Adhesion (On primed surface)	ASTM D 4541	5,6 MPa
Shore A/D Hardness	ASTM D 2240	90/40
Tensile strength	ASTM D 412	14 MPa
Elongation	ASTM D 412	400 %
Tear strength	ASTM D 624	69 N/mm
Chemical resistance	ASTM D 543	Good overall chemical resistance
UV resistance	ASTM G 53	no loss of gloss, no color change
Electric resistance	EN 1081	3,55 x 10 ⁹ Ω

REACTIVITY PROFILE	
Gel time	Tack free time
2-3 seconds	4-6 seconds

CHEMICAL PROPERTIES

LIQUID COMPONENT PROPERTIES*		
PROPERTY	ULTRALOK ALUM Hardener	ULTRALOK ALUM Resin
Color	Slightly yellow	Aluminium
Viscosity @ 20 °C	ca. 800 mPa s	ca. 975 mPa s
Specific Gravity @20 °C	ca. 1.14 g/cm ³	ca. 1.05 g/cm ³
Shelf Life of unopened drum properly stored	12 months	12 months
Storage Temperature	10 - 30°C	10 - 30°C
Mixing Ratio (volume)	1:1	1:1

*See SDS for more information

PROCESSING CONDITIONS

RECOMMENDED PROCESSING CONDITIONS*	
Initial Primary Heater Setpoint Temperature	65-70 °C
Initial Hose Heat Setpoint Temperature	65-70 °C
Initial Processing Setpoint Pressure	2000-2500 PSI
Temperatures during application	10 – 40°C
Humidity during application	< 85 %

*ULTRALOK ALUM application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment and other factors. While processing, the applicator must continuously observe the characteristics of the sprayed coating and adjust processing temperatures and pressures to maintain proper membrane structure, adhesion, cohesion and general quality of the coating. It is the sole responsibility of the applicator to process and apply ULTRALOK ALUM within specification.

Equipment must be capable of delivering the proper ratio (1:1 by volume) of polymeric isocyanate (PMDI) and polyol blend at adequate temperatures and spray pressures. The temperature of the substrate must be 5 degrees above dew point with maximum relative ambient humidity below 85%. Substrate must also be free of moisture (dew or frost), grease, oil, solvents and other materials that would adversely affect adhesion of the polyurethane foam.

PROCESSING CONDITIONS

ULTRALOK ALUM component A and component B should be stored between 10°C to 30°C. Both components have a shelf life of 12 months.

Before spraying, the ULTRALOK ALUM Component B must be mixed to ensure the even distribution of the color. Keep mixing for the whole duration of application. The material temperatures in the drums need to be at least 20 °C. This is achieved by re-circulating the material through the heaters on the proportioner back into the drums. Heater jackets with temperature control can also be used to help with heating the drums.

Do not store material on rigs other than what is required for the current application needs. Material left inside rigs can easily exceed this recommended temperature in the warmer months. The excessive heat will degrade the component B (resin) material and shorten its usable shelf life. Do not store material in open drums

If the material was transported in freezing conditions, store it in room temperature for a minimum of 24 hours to get proper material condition.

HEALTH AND SAFETY

HBS coating products have an excellent health and safety record.

As from 24 August 2023 adequate training is required before industrial or professional use.

Spray foam components should be handled with care and in strict accordance with safety guidelines according to adequate training. Always wear appropriate personal protective equipment (PPE) as stated in mandatory training. Work in a well-ventilated area. Contact with skin and eyes; in case of contact, rinse immediately with plenty of water and seek medical attention if irritation persists. Store components in tightly sealed containers at recommended temperatures, away from moisture, heat sources, and direct sunlight. Do not handle without proper training. Always refer to the product's Safety Data Sheet (SDS) for specific instructions and emergency procedures.

RE-ENTRY AND RE-OCCUPANCY PERIODS

Times based upon ventilation during and after spray application:

RE-ENTRY AND RE-OCCUPANCY PERIODS		
VENTILATION RATE (AIR CHANGES PER HOUR)	RE- ENTRY PERIOD FOR SPRAYERS, HELPERS, INFORMED TRADE WORKERS AND CONTRACTORS	RE-OCCUPANCY PERIOD FOR ALL OTHERS
At 0.3 ACH	24 hours	24 hours
AT 1.0 ACH	12 Hours	24 hours
At 10.0 ACH	4 hours	24 hours
At 40.0 ACH	1 hour	2 hours

Number of air changes can be calculated using the following formula:

$$ACH = \frac{\text{Fan Power in l/s} * 3,6}{\text{Room Volume in m}^3}$$

If the number of ACH is not sufficient a bigger fan or multiple fans may be used

PACKAGE

The components are supplied in barrels with capacity of 200 l.

Component A – 208 kg

Component B – 192 kg