

Ultra One A

PRODUCT DESCRIPTION

The product is a single-coat low temperature cure powder coating mainly developed for outdoor exposed heat sensitive material, such as insulated claddings and other types of insulated coiled sheets of ferrous and non-ferrous materials. This powder coating will meet stringent requirements for an outdoor environment. The product provides longevity to the outdoor fixtures by ensuring high levels of gloss retention, colour stability and corrosion protection along with aesthetic performance.

Can also be used for Medium Density Fibreboard (MDF) and other similar types of engineered wood substrates. When applied on such substrates the product gives the powder coated MDF surface an outstanding finish that meets the mechanical and chemical requirements of the general furniture industry.

Application areas

This product is recommended for interior and exterior use.

Typical application areas using ferrous and non-ferrous substrates include:

- Outdoor metal enclosure
- Outdoor city facility
- Heat sensitive substrates

Typical application areas:

- Kitchen cabinets
- Bathroom furniture
- Office furniture
- Home furniture
- Children's furniture

POWDER PROPERTIES

Storage

Keep in a dry cool area. Maximum temperature 17 °C Maximum relative humidity 60 %. If stored longer than 6 months a quality test must be performed. For transportation, air conditioned truck securing maximum temperature of 17 °C and maximum relative humidity of 60 % must be used.

APPLICATION

Pretreatment

For pre-coated metal

The overall performance of the coating system is largely dependent on the nature of the substrate and the type and quality of surface preparation. For optimal results, it is recommended the pre-coated surface be abraded using sandpaper or any other abrasive material either using manual or electrical driven equipment.

For natural wood and other wooden substrate

The overall quality of the coating system is largely dependent on the type of wood (natural or otherwise), the quality of the substrate preparation and the coating application line. Since there are many types of wood available in the market which can differ in moisture content and resistance, density profile, internal bond strength etc., it is recommended that the coater determines which type of wood will best achieve the desired quality according to powder application procedures.

The wood surface must be clean and free from dust, grease, adhesive and loose fibres. The wood may need to be sanded in order to homogenize the surface to be coated.

The edges should also be rounded and made smooth (minimum 1.5 degrees radius). For best results, the moisture content of the wood should be between 5 and 7 %.

Wood board should have a certain level of conductivity in order to attract and hold the electrostatic charged powder coating particles. In order to ensure that correct coating properties are achieved, preconditioning of the board to secure the correct moisture content will be necessary. This will enable good earthing to be achieved and therefore ensure the correct level of surface conductivity for coating. If in doubt, please seek advice from your Jotun technical service advisor.

When handling more porous wood boards, alternative surface and edge preparation techniques such as edge banding may be considered.

Powder application

Infrared heating or a combination of infrared and convection heating is recommended.

Curing schedule	Object temperature	Time
Ultra One A (infrared curing oven)	130 °C	3-5 minutes

Note! The exact curing conditions are dependent on the curing oven configuration, condition, and the substrate.

For wood and other wooden substrates, a fully cured film has to be reached in order to assure the correct film properties. An inadequately cured film (or prepared board) may result in film failure, e.g. edge cracking (especially when the board is subjected to environments with different humidity content), reduced chemical resistance and/or a sticky surface. Failure of this nature may appear a few hours after application as well as several months after application.

Recommended film thickness (µm): ≥ 50

Equipment

Suitable for Corona charging equipment.

APPEARANCE

Colour	The product is available in a range of white shades. Other custom requested colours are available upon technical approval.	
Gloss	EN ISO 2813 (60°)	5-45
Finish	Fine texture	

If the significant surface is too small or unsuitable for the gloss to be measured with the glossmeter, the gloss should be compared visually with the reference sample (from the same viewing angle).

Other gloss and finishes can be achieved based on technical approval.

PERFORMANCE

The technical data provided below are typical for this product when applied as follows:

Substrate	Abraded pre-coated metal
Substrate thickness (mm)	0.5
Film thickness (µm)	60-90
Typical values when tested.	

Property	Standard	Result

Adhesion	EN ISO 2409	Cross-cut rating Gt0 (100 % adhesion)
Chemical resistance	Internal Method (Perform a scratch test and expose the scratch area to fat)	No loss of adhesion, no blistering and no change in colour
Accelerated weathering	ISO 16474-3	Cycle: 4 hours at 50 °C UV and 4 hours at 40 °C condensation. No chalking, excellent gloss retention and colour stability after 300 hours testing.
Xenon Arc Accelerated Weathering	ISO 16474-2 Method A	Cycle: 102 minutes dry at 38 °C and 18 minutes water spray under UV. No chalking, excellent gloss retention and colour stability after 1000 hours testing.
Natural weathering test*	ISO 2810 (South Florida, 27 °N)	No chalking, excellent gloss retention and colour stability after 12 months exposure (angle of 5° to South).
Scratch resistance	ISO 1518-1/SIS 83 91 17	≤ 0.5 mm wide scratch at 5N load having a hemispherical hard-metal tip of radius 0.5 mm

**Natural weathering test was performed on RAL 7016 (Anthracite Grey)*

Sustainability

Powder coating is applied in air-and-powder mix in a strictly controlled factory process using electrostatic gun and a high temperature curing oven to create film. Virtually no VOCs are released in the process compared to traditional liquid paints. Unused or oversprayed powder can be recycled with minimal wastage. In addition, all Jotun Powder Coatings' products do not contain intentionally added lead.

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.