Technical Datasheet

Interpon 100 AM

Epoxy powder coatings with antimicrobial technology

Product description

Interpon 100 AM is a series of epoxy-based powder coatings designed to give optimum mechanical performance and exceptional protective qualities on fabrications and components where long-term exposure to ultra violet light or exterior weathering is not anticipated in combination with specific antimicrobial activity.

Interpon 100 AM powders are available in the full range of colors in gloss, reduced gloss, textured, metallic, and other special finishes, or can be custom-matched to the user's requirements.

Interpon 100 AM is a high-quality powder coating designed to meet decorative and functional demands. Additionally, Interpon 100 AM uses antimicrobial technology to reduce the number of microbes such as bacteria and mold. Test results have proven a reduction of bacteria and mold up to 99.9%.

Powder properties

	Typical value
Chemical Type	Epoxy
Density	1.2 - 1.9 g/cm³, depending on colour and effect
Recommended film thickness	60 - 90µm
Shelf life	12 months
Storage Conditions	Under dry, cool (≤ 25°C) conditions (open boxes must be resealed)
Curing schedule	15-20 min at 180°C 9-12 min at 190°C 5-7 min at 200°C

Pre-treatment

Aluminium components should receive a full multi-stage chromate conversion coating or suitable chrome-free pre-treatment or suitable pre-anodising to clean and condition the substrate. Detailed advice should be sought from the pre-treatment supplier. Iron phosphate and particularly Zinc phosphating of ferrous metals improves corrosion resistance. Aluminium substrates may require a chromate conversion coating.

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Application

Powders can be applied by manual or automatic electrostatic spray equipment.
Applicators and fabricators are advised to use a single batch for parts that will be assembled together. Differences are more likely with special effect powders.
Bonded products have better application properties than blended products (more stable) but attention should still be paid to line settings in order to avoid “marble effect” and changes in aspect after recycling.
Different substrates (aluminium, steel, galvanized steel…), use of primer, and big changes in film thickness may give a different aspect.
Products with different codes should not be mixed even if same colour and gloss.
For more detailed information please contact AkzoNobel technical service team.
For more information, it is suggested to read the Metallic Applications Guidelines.
It is recommended that for consistent application and appearance product be fluidized during application.

Application Method	Tribo, Electrostatic
Recycling	Unused powder can be reclaimed using suitable equipment and recycled through the coating system, but a minimum of 70% virgin powder should be used.

Test conditions

Actual product performance will depend upon the circumstances under which the product is used.
The results are based on mechanical and chemical tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for guidance only.

Pre-treatment	Zinc Phosphate
Substrate	Polished steel
Curing schedule	5 min at 200°C (object temperature)
Film Thickness	60 - 70µm

Mechanical tests

	Typical value	Method/standard
Adhesion	Class 0	ISO 2409 (2 mm Crosshatch)
Erichsen cupping	Pass 5 mm	ISO 1520
Flexibility	Pass 5 mm	ISO 1519
Hardness	Pass - no penetration to substrate	ISO 1518-1 (2000g)
Impact resistance	Pass 2,5 Joules reverse & direct (20 in lb)	ISO 6272-2 (d/r)

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Chemical and durability tests

Whilst maintaining the general protective and anti-corrosive properties of powder coatings, aluminum and copper/bronze metallic finishes, when submitted to the listed tests, may rapidly show a loss of metallic aspect. The results shown are based on tests which (unless otherwise indicated) have been carried out under laboratory conditions and are given for advice only, actual performance depends upon the circumstances under which the product is used.

	Typical value	Method/standard
Chemical Resistance	Excellent resistance to acid, alkalis, oils and chemicals at room temperatures.	
Salt spray test	Pass, no corrosion creep more than 3 mm from scribe, 500 h	ISO 9227

Environmental and durability tests

	Typical value	Method/standard
Humidity	Pass - no blistering or loss of gloss, 1000 h	ISO 6270-2 CH (Constant humidity)
Exterior durability	Some chalking and loss of gloss after 3-6 months continuous outdoor exposure. Protective properties retained. Not recommended for outdoor applications.	

Repair

Surface preparation	Damaged areas must be clean and free of grease or rust. Dry-sand the area with 600 grade paper down to the substrate. The area must be completely free of dust and cleaned with a non-aggressive solvent before proceeding. Any damage of the coating system must be repaired as soon as possible.
Application	For repairs a PU (2K or 1K) liquid paint is recommended.

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Additional Information

Interpon 100 AM has been tested for antimicrobial efficacy in accordance with ISO 22196: 2011 and exhibited a minimum of 95% and up to 99.99% reduction in the population of Escherichia coli and Methicillin-Resistant Staphylococcus aureus (MRSA).

Testing was carried out by an independent laboratory and is classified as 'microbiological results satisfactory'. Silver ion technology has been proven effective against the following bacteria in laboratory conditions:

Multi Drug Resistant Bacteria
ESBL Escherichia coli
CRE Klebsiella pneumoniae
MRSA Methicillin Resistant Staphylococcus aureus
VRE Vancomycin Resistant Enterococcus

Bacteria
Acinetobacter baumanii
Bacillus subtilis
Campylobacter spp.
Clostridium difficile (excluding spore form)
Escherichia coli O157
Enterobacter aerogenes
Enterococcus faecalis
Legionella spp.
Listeria monocytogenes
Pseudomonas aeruginosa
Salmonella Enteritidis
Salmonella Typhimurium
Shigella spp.
Staphylococcus aureus
Staphylococcus epidermidis

Interpon 100 AM contains silver phosphate glass antimicrobial technology to preserve the coating surface and prevent degradation caused by microbial growth once applied to the intended substrate.

Safety Precautions

This product is intended for use only by professional applicators in industrial environments and should not be used without reference to the relevant health and safety data sheet which Akzo Nobel has provided to its customers.

Disclaimer

http://www.interpon.com/contact-us/

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