

Technical Datasheet

INTERPON D3020

Fluoropolymer (FEVE or PVF3) Powder Coatings



Product description

Interpon D3020 is a series of hyperdurable powder coatings designed to meet the most demanding architectural specification requirements in the world. AkzoNobel's Fluorocarbon technology uses innovative fluorocarbon (FEVE or PVF3) polymer chemistry that is designed to provide maximum gloss and color retention in service.

Interpon D3020 is also designed to provide excellent cosmetic and functional protection whilst exploiting the recognized benefits of powder coatings complying with Qualicoat Class 3 and AAMA2605 and EN12206 specifications.

Approvals

Qualicoat Approval	P-1887 (Light) (TR) P-1888 (Medium) (TR) P-1889 (Dark) (TR)
GSB Approval	246c
Resistance to Fire Approval	Classification: A2,s1,d0 with film thickness 50 - 70 µm (D3020) according to EN13501-1

Powder properties

	Typical value
Chemical Type	Fluoropolymer
Appearance	Smooth Matt
Density	1.2 - 1.7 g/cm ³ , depending on colour
Gloss (60°)	15 - 30 GU
Particle size distribution	Suitable for electrostatic spray.
Shelf life	18 months below 25 °C
Storage Conditions	Under dry, cool ($\leq 25^{\circ}\text{C}$) conditions (open boxes must be resealed)
Curing schedule	20 - 35 min at 190°C 15 - 25 min at 200°C 10- 15 min at 210°C (object temperature)

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. For maximum protection it is essential to pre-treat components prior to the application of Interpon in accordance with the Interpon D Approved Applicator Manual.

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

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Application

Powders can be applied by manual or automatic electrostatic spray equipment. All powders can show small color differences from batch to batch, this is normal and unavoidable. 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. Products with different codes should not be mixed even if same colour and gloss. While AkzoNobel take every precaution to minimize visible differences, this cannot be guaranteed. 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. For more information, it is suggested to read the Metallic Applications Guidelines.

Application Method	Electrostatic
Recycling	A constant ratio between virgin and recycled powders should be fixed by the coater in order to achieve a consistent effect following the AkzoNobel rules. Please consult AkzoNobel for further details as to the correct mixing ratio for virgin/reclaim powder. Unused powder can be reclaimed up to a maximum of 20% using suitable equipment and recycled through the system.

Post application

For specific advice on the suitability of post coating processes such as bending or the use of sealants, adhesives, thermal break, cleaning etc. Please consult AkzoNobel.

Test conditions

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. Testing has been determined under laboratory conditions using the following application properties and is for guidance only.

Pre-treatment	Chrome free Qualicoat/GSB approved pretreatment
Substrate	Aluminum (0.5-0.8 mm Al Mg1)
Curing schedule	20 min at 200°C (object temperature)
Film Thickness	50 - 80µm, ISO 2360

Mechanical tests

	Typical value	Method/standard
Adhesion	Class 0	ISO 2409 (2 mm Crosshatch)
Erichsen cupping	Pass Qualicoat class 3 requirements	ISO 1520
Flexibility	Pass Qualicoat class 3 requirements	ISO 1519
Impact resistance	Pass Qualicoat class 3 requirements	ISO 6272-2 (d/r)

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Chemical and durability tests

	Typical value	Method/standard
Chemical Resistance	Generally good resistance to acid, alkalis and oil at room temperatures.	
Sulphur Dioxide Resistance	Pass 24 cycles– no blistering, loss of gloss or discoloration	ISO 22479

Environmental and durability tests

	Typical value	Method/standard
Acetic acid salt spray	No blistering in excess of 2 (S2) according to ISO 4628-2. Infiltration <16 mm ² /10 cm, length of any single infiltration shall not exceed 3 mm., 2000 h	ISO 9227
Humidity	No blistering in excess of 2 (S2) according to ISO 4628-2; the maximum infiltration at the cross is 1 mm, 2000 h	ISO 6270-2 CH (Constant humidity)
Exterior durability	Meets Qualicoat Class 3 and AAMA2605 requirements after 10 years of Florida exposure	ISO 2810
Mortar resistance	No effect after 24 hours	EN 12206-1
Wet adhesion	No sign of detachment or blistering. Cross-cut value 0. Colour change is acceptable.	Qualicoat/GSB

Maintenance

For specific advice on Cleaning and Maintenance, please consult the Interpon D series Cleaning and Maintenance Guidelines available from AkzoNobel.

Repair

Surface preparation Please see details on Interpon D Repair producedure document

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

IMPORTANT NOTE: The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product.

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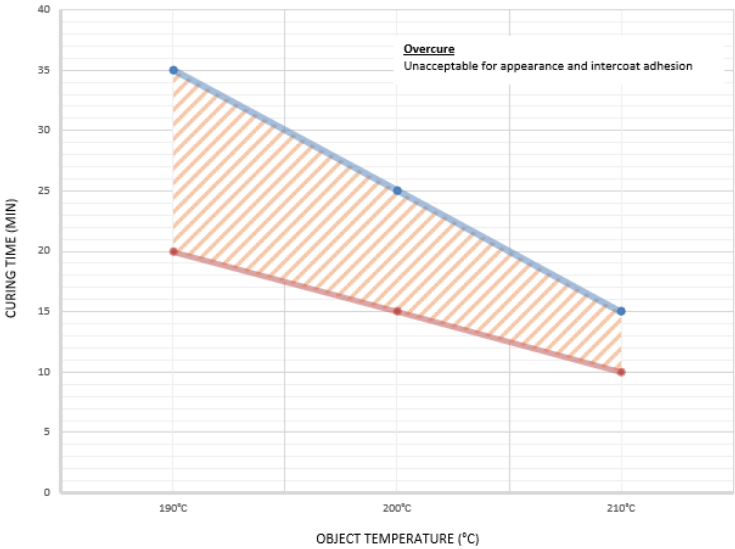
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Appendix

Curing window

Interpon D3020 - curing window



Disclaimer:
The data contained in this Curing Window graph is obtained from laboratory coating trials under ideal curing conditions, and using perfectly prepared uncoated testing panels; consequently the curing window needs to be regarded as indicative only.
To ensure the correct curing is achieved, specific thermal and performance checks should be