DuPont Powder Coatings

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Data Sheet

Flamulit® HTC 222

thermoplastic powder coatings

Product

Flamulit® HTC 222 is a polyolefin based coating powder developed to give primers characterised by excellent adhesion on metal parts.

Typical applications

Flamulit® HTC 222 improves the adhesion of polyethylene on metal parts or thermosetting resins. One major application concerns pipes, containers and fittings coating. **Flamulit® HTC 222** is then used as adhesion promoter between epoxy resin (Mapec process) and polyethylene or directly between the metal part and polyethylene in two layers coating process.

Typical coating conditions

Recommended pre-treatment :
Alkaline degreasing followed by phosphatation and assivation. For increased mechanical adhesion, we recommend that parts be sand blasted. **Flamulit® HTC 222** can be applied by fluidized bed or electrostatic or spraying techniques.
Procedure for fluidized bed :

- preheat 220-340°C according to metal thickness
- immerse 5 to 30 seconds in fluidized bed
- auto-smoothing (cooled in ambient air)

For more informations, see DuPont guidelines for Metal Coating procedures.

Results

Primer with thickness between 350 and 600 µm (i.e. 350-600 g/m^2)

Characteristics

General properties	Units	Methods	Values
MFI (190°C/2.16kg)	g/10min	ASTM D 1238	8
Particle size	µm	Alpine	below 330
brittle point	°C	ASTM D 746	-30
softening temperature (Vicat)	°C	ASTM D 1525	84
Elongation at break	%	ASTM D 638	600
Coating properties			
Maximum working temperature	°C		55
UV stability	Does not apply for primers.		
Specific gravity of the coating	g/cm^3	ASTM D 792	0.92 to 0.95
Salt spray		ASTM B 117 scribed	corrosion 3mm from scribe
		unscribed	> 2000 hrs
Hardness Shore D		ASTM D 2240	48
Adhesion : squaring		AFNOR T 30-038	no stripping
separation of the tongue		AFNOR T 58-112	no stripping
Electric strength	kV/mm	CEI 243-1	> 20
Erichsen static stamping	mm	ISO 1520	8
Chemical resistance			
Environmental stress cracking	hrs	ASTM D 1693	> 1000
Dilute acids	good (except acetic acid)		
Dilute alkalis	good		
Solvents	poor		
Mineral salt solutions	good		

Edition of April 01, subject to modifications

For Safety, Health, storage and handling recommendations as well as the disclaimer information, see the DuPont Metal Coating general guideline