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Spec_Cl_cd_MProtect_300_09/18

Specification Clause

MasterProtect® 300

Description
MasterProtect 300 is a high performance elastomeric, waterproof coating based on acrylic co-polymers. It is a single component, ready-to-use material which can be applied by brush, roller or airless spray. When cured, it provides an aesthetic, durable, breathable coating which is waterproof, crack bridging and protects the structure from water-borne aggressive agents such as chloride ions which initiate corrosion in the reinforcing steel and CO_2 which reduces the protective properties of the concrete.

Where indicated on the contract documents the elastomeric, crack bridging, waterproof and anti-carbonation coating for concrete and masonry shall be **MasterProtect 300** manufactured by BASF Construction Chemicals UAE LLC.

The product shall meet or exceed the following performance criteria based on 400 microns DFT:

Testing	Standard	Results
Solids content by volume		62%
Solids content by weight		73%
Reduction in chloride ion ingress @ 28 days		97%
Water vapour transmission:	ASTM E96	26gms/m²/24 hours
#Chloride penetration after 2000hrs accelerated weathering	AASHTO T-259 and T-260	No penetration
Carbon dioxide diffusion after 2000 hrs accelerated weathering:		R (m) value at 400 microns DFT greater than 200m
Water absorption	ASTM C642 : 97	<1%
Appearance after 2000hrs accelerated weathering		No colour change, cracking, chalking or blistering observed
Pull Off Strength	ASTM D4541	>1N/mm²
Crack Bridging Capacity	BS EN 1062-7 Method A	>1mm
Tensile Strength & Elongation	ASTM D412	Tensile – 2.8N/mm² Elongation – 218%
Determination of Chloride Ion Diffusion		No chloride ion diffusion after 6 months
Determination of Carbon Dioxide Diffusion Coefficient	CO_2 Diffusion Coefficient D_{CO2} (cm^2s^{-1}) 3.29 x 10^{-7} CO_2 Diffusion Resistant Coefficient (μ-value) 4.53 x 10^5 Equivalent Air Layer Thickness S_D value (m) 178 Equivalent Concrete Thickness S_c value (cm) 45 Mean Dry Film Thickness (μm) 393	
Salt Spray	ASTM B117: 95	Salt Spray @ 1000 hours No change in original appearance after 1000 hours of salt spray test. No evidence of any surface blistering, chalking and cracking after exposure
Water Permeability @ 7 days	BS EN 12390 Part 8 2000	Nil @ 5 Bar pressure
Tear Resistance @ 7 days	ASTM D1004-08	>15kN/m
Rapid Chloride Permeability	AASHTO T277	Very Low
Light Reflectance Value (LRV)	ISO 2814 / ASTM C609-7 / BS 8493	White - >85% Beige - >64%
Fire Testing	BS 476 Part 6, Part 7	Class 1

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Testing	Standard	Results
Method of Classification - surface spread of flame of products		
Determination of Solar reflectance Index	ASTM E1980 : 01	>85%
Volatile Organic Content	SCAQMD	<30g/L
Chemical resistance chart available on requests		
Elongation at break		>300%
Chemical resistance		Resistant to spillage of gasoline, diesel, sewage, weak acids, and alkalis

The product shall be manufactured by a company certified to confirm to the requirements of the quality, environmental and occupational health & safety standards of ISO 9001, ISO 14001 and OHSAS 18001

The technical information and application advice given in this BASF publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

For additional information please consult the product Technical Data Sheet.
BASF Construction Chemicals UAE LLC can provide a full project specification and method statement on request.

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