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MODEL CLAUSES FOR CIVIL ENGINEERING WORKS

SECTION 176 PROTECTIVE COATING SYSTEMS

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176A: Protective coating systems for new structural steelwork

System reference	Title	Substrate	Coats (Stripe coats omitted)			
			A	B	C (Intermediate coat)	D (Topcoat)
N1	Thermally sprayed metal/epoxy protective system	Steel blast-cleaned to a surface standard Sa3 (BS EN ISO 8501-1) with a surface profile mean peak to valley height of 70 to 100 microns	Aluminium or zinc thermally sprayed metal coating to BS EN ISO 2063 with a minimum dft of 100 microns	Item 7.1.1. Epoxy sealer for thermally sprayed metal coatings with a maximum dft of 25 microns	Select from the following and use a minimum dft of 150 microns; Item 7.1.4. High solids epoxy primer Item 7.2.2. Epoxy Intermediate coat	Select from the following and use a minimum dft of 50 microns; Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish Item 7.3.1. Acrylic urethane Topcoat Item 7.3.4. Polysiloxane Topcoat
N2	Epoxy glass flake protective system	Steel blast-cleaned to a surface standard Sa2½ (BS EN ISO 8501-1) and a surface profile mean peak to valley height of 70 to 100 microns	Item 7.1.2. Epoxy blast Primer with a minimum dft of 25 microns		Item 7.2.3. Epoxy glass flake - Intermediate coat with a minimum dft of 400 microns	Select from the following and use a minimum dft of 50 microns; Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish Item 7.3.1. Acrylic urethane Topcoat Item 7.3.4. Polysiloxane Topcoat
N3: Not used						

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System reference	Title	Substrate	Coats (Stripe coats omitted)			
			A	B	C (Intermediate coat)	D (Topcoat)
N4	Epoxy MIO protective system	Steel blast-cleaned to a surface standard Sa2½ (BS EN ISO 8501-1) and a surface profile mean peak to valley height of 70 to 100 microns	Select from the following and use a minimum dft of 50 microns; Item 7.1.2. Epoxy blast Primer Item 7.1.3. Zinc rich epoxy blast Primer	Select from the following; Item 7.1.4. High solids epoxy Primer with a minimum dft of 100 microns Item 7.2.2. Epoxy Intermediate coat with a minimum dft of 125 microns	Item 7.2.2. Epoxy Intermediate coat with a minimum dft of 125 microns	Select from the following and use a minimum dft of 50 microns; Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish Item 7.3.1. Acrylic urethane Topcoat Item 7.3.4. Polysiloxane Topcoat
N5: Not used						
N6	Protective system for sub surface Stations: blast-cleaned steel	Steel blast-cleaned to a surface standard Sa2½ (BS EN ISO 8501-1) and a surface profile mean peak to valley height of 70 to 100 microns	Select from the following and use a minimum dft of 50 microns and fire resistance to 7.7; Item 7.1.2. Epoxy blast Primer Item 7.1.4. High solids epoxy Primer			Select from the following and use a minimum dft of 50 microns; Item 5.7.2. Epoxy finish for sub surface Stations Item 7.2.2. Epoxy Intermediate coat Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish
N7: Not used. Use N1 additionally tested for fire resistance (reference N1F)						
N8: Not used. Use N9 additionally tested for fire resistance (reference N9F)						

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System reference	Title	Substrate	Coats (Stripe coats omitted)			
			A	B	C (Intermediate coat)	D (Topcoat)
N9	Protective system for galvanized steel	Steel hot dip galvanized to BS EN ISO 1461 degreased and abraded, or flash blast-cleaned to provide a surface profile of 20 to 30 microns or etched using Item 5.13.11	Item 7.1.2. Epoxy blast Primer with a minimum dft of 25 microns. This may be omitted if it can be proved that the Intermediate coat has adequate adhesion to the galvanized steel		Item 7.2.2. Epoxy Intermediate coat with a minimum dft of 125 microns	Select from the following and use a minimum dft of 50 microns; Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish Item 7.3.1. Acrylic urethane Topcoat Item 7.3.4. Polysiloxane Topcoat
N10: Not used						
N11.1	Thermally sprayed metal/epoxy MIO protective system for the interior of box girder. Use System NI without Topcoat					
N11.2: Not used						
N12.1	Epoxy MIO protective system for the interior of box girder	Steel blast-cleaned to a surface standard Sa2½ (BS EN ISO 8501-1) and a surface profile mean peak to valley height of 70 to 100 microns	Item 7.1.4. High solids epoxy Primer with a minimum dft of 100 microns		Item 7.2.2. Epoxy Intermediate coat (MIO version), with a minimum dft of 125 microns	
N12.2: Not used						
N13	Epoxy protective system for steelwork for interior environments. Use N4 without B coat					
N14: Not used						

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System reference	Title	Substrate	Coats (Stripe coats omitted)			
			A	B	C (Intermediate coat)	D (Topcoat)
N15	Protective treatment for aluminium	Aluminium degreased and abraded to remove all surface contaminants			Item 7.2.2. Epoxy Intermediate coat with a minimum dft of 100 microns	Select from the following and use a minimum dft of 50 microns; Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish Item 7.3.1. Acrylic urethane Topcoat Item 7.3.4. Polysiloxane Topcoat
N16	Protective system for electroplated zinc	Zinc electroplated to BS EN 12329: Classification number Fe/Zn 25 and degreased	Item 5.13.11. Mordant Wash for galvanised surfaces		Item 7.2.2. Epoxy Intermediate coat with a minimum dft of 100 microns	Select from the following and use a minimum dft of 50 microns; Item 5.6.3. Anti-graffiti paint - polyurethane coloured finish Item 7.3.1. Acrylic urethane Topcoat
N17	Intumescent fire protection system for new internal steelwork	Steel blast-cleaned to a surface standard Sa2½ (BS EN ISO 8501-1) and a surface profile mean peak to valley height of 70 to 100 microns	Select from the following; Item 7.1.2. Epoxy blast Primer, with a minimum dft of 50 microns Item 7.1.4. High solids epoxy Primer with a minimum dft of 100 microns		Select from the following using a dft recommended for the specified period of fire resistance and section factor of the steel member; Item 9.1.1. Synthetic rubber intumescent coating for steel Item 9.1.2 Epoxy intumescent coating for steel Item 9.1.3. Water-based intumescent coating	Select finish/sealer coat, using a dft in accordance with the manufacturer's recommendations and which is compatible with Coat C, from the following; Item 9.2.1. Synthetic rubber Top/Sealer coat Item 7.3.1. Acrylic urethane Topcoat Item 9.2.3. Water-based Top/Sealer coat