

# Technical Data Sheet

## Kulorthene Abcite® X60



### Product description

Kulorthene Abcite® X60 is a single layer, primer-free, halogen free, high strength adhesive thermoplastic powder coating which provides best in class and highly durable corrosion protection to steel and other metals in the most severe conditions.

Kulorthene Abcite® X60 features a unique set of properties: tough, flexible, and highly adhesive to metal substrates, it is also highly resistant to long-term outdoor exposure, as well as to alkaline and acid chemical attack.

Its hardness, abrasion and impact resistance, combined with its flexibility complete the Abcite® X60 coating characteristics achieving an unmatched performance.

Kulorthene Abcite® X60 is designed for coating metal parts by electrostatic spraying or hot flocking.

### Typical applications

Kulorthene Abcite® X60 performs exceptionally well in extremely corrosive and abrasive marine, offshore and industrial environments. It enables maintenance-free, durable exterior use in applications such as offshore structures, street furniture and water industry pipes, valves and fittings.

### Product certifications

<b>Corrosion protection :</b>	
• ISO 12944 part 6, corrosivity categories C5-M High and Im3 High	
• ISO 20340 (offshore environments), category C5-M	
<b>Drinking water* :</b>	
• Australia AS/NZS 4020, AS/NZS 4158	• New Zealand AS/NZS 4020, AS/NZS 4158
• Belgium Hydrocheck	• United Kingdom WRAS
• France Attestation de Conformité Sanitaire (ACS)	• USA NSF/ANSI Standard 61
• Germany KTW and DVGW	
<b>Food contact*</b>	
• Compliant with EU regulation No. 10/2011 and FDA CFR Title 21	
• Certificates valid for certain colours. Please contact your Dulux Powder & Industrial Coating Systems representative for additional information	

### Storage:

Kulorthene Abcite® X60 should be stored in a cool (<50°C) and dry space, out of direct sunlight exposure. The product should be used within 5 years after the production date.

Agglomerates may form during transportation and storage. This reversible phenomenon is not a sign of poor quality but may occur in case of specific environmental conditions causing compaction. The powder can easily be brought back to its original state through sieving.

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General properties	Measure	Unit	Standard and test conditions
Maximum particle size	150	µm	ISO 8130-1
Bulk density	0.33	g.cm <sup>-3</sup>	ASTM D1895 (Method A)
Specific gravity	0.94	g.cm <sup>-3</sup>	ISO 1183
Melt flow index	25	g/10min	ISO 1133 (190°C, 2.16kg)
Gloss 60°	60-80	%	ISO 2813
<b>Thermal properties</b>			
Melting temperature	90	°C	ISO 3146
Vicat softening temperature	63	°C	ISO 306
Maximum continuous temperature	75	°C	Test Axalta
Thermal conductivity	0.25	W.m <sup>-1</sup> .K <sup>-1</sup>	ASTM E1530
Flammability rating	V-0		UL 94
<b>Mechanical Properties</b>			
Abrasion resistance (Taber)	12	mg (weight loss)	ISO 9352 (CS-10, 1000g)
Adhesion	>8 (100% Y)	MPa	ISO 4624 (20mm dolly)
Hardness	60	Shore D	ASTM D2240
Impact resistance	>18.2	J	ASTM D2794 (1.5mm steel; ball diameter : 15.9mm)
Tensile strain at break	460	%	ISO 527
Tensile strength	23	MPa	ISO 527
<b>Electrical properties</b>			
Dielectric strength	48	kV.mm <sup>-1</sup>	ASTM D149
Volume resistivity	2.10 <sup>18</sup>	Ω.cm	ASTM D257
<b>Properties under accelerated aging</b>			
Salt spray resistance	2000h	0	mm (steel substrate corrosion) ISO 9227 (NSS, with scribe)
	3500h	<1	
UV stability*	2000h	No damage	ISO 4892-3†
* Color and gloss deviation is color-dependent and available upon request			
† UVB-313 lamp, cycles: 8h at 60°C (black panel) and 0.71 W/m <sup>2</sup> /nm (at 310nm), then 4h at 50°C with condensation.			
Chemical resistance*		20°C	60°C
	Acids	Excellent	Excellent
	Alkalis	Excellent	Excellent
	Fuels	Good	Poor
	Solvents	Good	Not recommended
ISO 2812 and ISO 4628			
* A specific chemical resistance test is recommended before any industrial application.			
These tests were performed using Abcite® X60 Neutral, with degreased, grit-blasted steel panels coated by dipping in a fluidized bed (thickness 500 ± 100µm), or with injected samples. The results may vary for other Abcite® X60 colors, other substrate types or a different coating thickness.			

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