

 <p>JALITE[®] Photoluminescent Safety Products</p>	<p>JALITE PLC Wins House, Bentalls Pipps Hill Industrial Estate Basildon, Essex, SS14 3BS, UK Tel: (44) 0 1268 242300 Fax: (44) 0 1268 274148 Email: sales@jalite.com</p>	<p>JALITE USA 190 Old Milford Milford, PA 18337 USA Tel: (1) 570 296 6906 Fax: (1) 570 296 5656 Email: sales@jaliteusa.com</p>	<p>JALITE ASIA 528 Ocean Centre 5 Canton Road, Tsimshatsui Kowloon, Hong Kong Tel: (852) 3426 9266 Fax: (852) 3528 0757 Email: sales@jalite-asia.com</p>
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JALITE AAA RIGID MATERIAL SPECIFICATION

NON-RADIOACTIVE PHOTOLUMINESCENT MATERIALS FOR SAFETY SIGNS AND SAFETY WAY-GUIDANCE COMPONENTS.

Description:

Non-Radioactive PVC photoluminescent material, three layer construction consisting of a white, reflective base layer, a middle layer containing a non-radioactive, non-toxic chemical phosphor and covered with a clear protective layer.

Material Properties:

Properties	Test methods	Unit	Characteristic value
Colour	-	-	Yellow / Green
Thickness	DIN 53370	mm	1.3mm
Shrinkage	DIN 53377 (80°C / 10 min)	%	< 3
Tensile stress at break	ISO EN DIN 527-1-2	%	not applicable
Surface hardness	DIN 53505	Shore D	approx. 72
Scratch resistance	DIN 68861-4 (Erichsen 413)	N	0,9
Abrasion resistance	DIN 68861-2 (Taber 5131)	revolutions	1500 (without change of photoluminescence)
Rigidity test	ISO 17398		Rigid at thickness of ≥1200 mm
De-lamination strength of all layers	ISO 17398	N / 25mm	Not detectable, material breaks
Gloss	ISO 17398	60%	Low / Intermediate
Photoluminescence	ISO 17398	mcd/m ²	See table 1
Fire test	DIN 53438-3	class	K 1
Artificial weathering	EN ISO 105-A02		The exposed areas were slightly darker after exposure. Contrast ratio: grade < 5

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Resistance against salt spray test	DIN 50021 Exposure time: 120h		no visible change
Resistance to climatic conditions	ISO 17398		-25°C: no visible change +80°C: no visible change
Resistance to humidity	ISO 17398		no visible change
Water resistance	ISO 17398		no visible change
Resistance to test liquids	ISO 17398	Grade (5 =no vis. change 1=surface destroyed)	Distilled Water (W): 5 Detergent solution (L): 5 General cleaner (K): 5 Transformer oil (T): 5 White spirit (B): 5 Antifreeze (F): 5 Diesel fuel (D): 5
Chemical resistance against cold liquid	DIN EN 12720	Grade (5 =no vis. change 1=surface destroyed)	Acetone: 4 1:1 Butyl-/Ethylacetate: 3-4 Ethanol 48%: 5 Ethanol 96%: 5
Wipe resistance	ISO 17398		No visible change
Volatiles	The ingredients of the different layers have been classified as non critical for the human being. Moreover, GC-ECD and GC-MS measurements of the material heated to a temperature of 80°C do not show any critical peaks.		

Table 1: Luminance Performance

Excitation: lux level and time	2 minutes		10 minutes		30 minutes		60 minutes		Time to 0.3mcd/m ² (min)	
	1000 lux for 5 minutes (DIN 67 510 / PSPA)	1020	690	195	140	54	45	22	20	2100
21.5 lux for 120 minutes (NYC RS6-1)	-	-	54	30	-	-	10	7	90 min	
									6	5
25 lux for 24 hours (ISO 15370 & IMO RESOLUTION A.752(18))	-	-	60	15	-	-	11	2	-	-

Jalite AAA Material
 Standard Requirement

Luminance results are measured in mcd/m²

N.B. All values at all decay times are evaluated from mean readings of standard production data.