Material specification

Thermal Properties

Thermal Shock	2000 cycles (90 sec. at 75 °C, 90 sec. dwell, 90 sec. at 15°C) No effect
	Should not be used with dry-ice or liquid nitrogen.
Smoke Emission	Low Smoke Emission – BS 6853 1999 App. D Clause d.8.4
	Result – Ao(on) 8.75, Ao(off) 10.41
Flammability	Class 0
Thermal Decomposition	350° C
Glass transition temperature (Tg)	120 - 130 °C

Mechanical Properties

Tensile strength	85 N/mm²
Tensile Modulus	10,500 N/mm²
Elongation at break	0.8%
Flexural strength	112 N/mm²
Flexural Modulus	10,000 N/mm²
Compressive Strength	190 N/mm²
Coefficient of linear thermal expansion	34 x 10^{-6}
Water absorption - 24 hours at 23°C	5-10 mg (0.06-0.068%) ISO 62 (1980)

Radioactive Decontamination

	BS 4247 Part 1 Test A
Decontamination factor (geometric mean)	5598.0
Deviation factor	1.25
Ease of radioactive decontamination classification	"Excellent"

Chemical Resistance (24 hour spot test. Based on BS EN 438-2:1991)

Acetone	Unaffected	Hydrogen Peroxide	Unaffected
Acetonitrile	Unaffected	Methanol	Unaffected
Ammonium Hydroxide 28%	Unaffected	Methanol	Unaffected
Aqua regia	Unaffected	Nitric acid 70%	Very slight bleaching
Benzyl alcohol	Unaffected	Nitric acid - concentrated	Slight yellowing
Chloroform	Unaffected	Nitric acid - fuming	Attack and staining
Chloroform - 100%	Unaffected	Perchloric acid - 0.1N	Unaffected
Chromic acid pickle (*1)	Unaffected	Phosphoric acid - concentrated	Unaffected
Dichloromethane	Surface attack	Potassium hydroxide pellet (*2)	Unaffected
Dimethylformamide	Unaffected	Sodium hydroxide - 50%	Unaffected
Ethyl acetate	Unaffected	Sodium hydroxide pellet (*2)	Unaffected
Formaldehyde 37%	Unaffected	Sodium hypochlorite	Unaffected
Hydrochloric acid - 30%	Unaffected	Sulphuric acid - 70%	Unaffected
Hydrochloric acid - concentrated	Unaffected	Sulphuric acid - concentrated	Surface attack
Hydrofluoric acid - 40%	Slight bleaching	Xylene	Unaffected

- *1 - 72g/l chromium trioxide + 360g/l sulphuric acid
- *2 - Changes to concentrated solution, then partly carbonates.
- Simmons may alter the specification of epoxy resin systems without notification