

TEST MATRIX for Toughcoat and Chromatics Product

Product	Test	Reference	Date	Tested by	Result	Certified or Indicative?
Suncool Blue Chromatics	50C water soak, 30 days	Tests E	1999	Pilkington	Bubbles between coating & Foil, not seen at surface	I
Suncool Bronze Chromatics	50C water soak, 30 days	Tests E	1999	Pilkington	Spots visible up to 5mm diameter	I
Suncool Silver Chromatics	50C water soak, 30 days	Tests E	1999	Pilkington	Bubbles between coating & Foil, not seen at surface	I
Toughcoat - RAL 3000 Red	Florida 5 degree direct exposure	Jotun	2001	Jotun (UK)	Slight to moderate changes with slight fading	I
Toughcoat - RAL 8014 Brown	Florida 5 degree direct exposure	Jotun	2001	Jotun (UK)	Very slight changes and darkening	I
Toughcoat - RAL 9010 White	Florida 5 degree direct exposure	Jotun	2001	Jotun (UK)	No Change	I
Toughcoat - various colours	Humidity test, 40C 80%, 300 Hours	Jotun	2001	Jotun (N)	No Change	I
Toughcoat - various colours	QUV (B) 5000 Hours	Jotun	2001	Jotun (N)	No change	I
Toughcoat - various colours	QUV (A), 5000 Hours	Jotun	2001	Jotun (UK)	No change	I
Toughcoat - various colours	Neutral Saltspray, 13,100 Hours	Jotun	2001	Jotun (UK)	No change	I
Plain colour (Blue) Toughcoat	50C water soak, 30 days	Internal	Jan-04	Internal	No Changes	I
Plain colour (White) Chromatics	50C water soak, 30 days	Internal	Jan-04	Internal	No Changes	I
Print, Toughcoat + Foil edge wrap	50C water soak, 30 days	Internal	Jan-04	Internal	No change. Foil stayed intact	I
Print, Toughcoat + Glued insulation & Foil edge wrap	50C water soak, 30 days	Internal	Jan-04	Internal	Glue failed after 12 days. No other problems	I
Print on silane only no backing, no clearcoat	50C water soak, 30 days	Internal	Jun-04	Internal	No Changes	I
Print on silane only no backing, no clearcoat	Boil Test	Internal	Jun-04	Internal	No Change, 6 Hours	I

Product	Test	Reference	Date	Tested by	Result	Certified or Indicative?
Print on silane only no backing, no clearcoat	Autoclave, 5 short Cycles	Internal	Sep-04	Internal	No Changes	I
Print, Pe Backing + protective film	50C water soak, 30 days	Internal	Sep-04	Internal	Film very poor, print faded up to 5mm from edge	I
4mm Print, PE backed	Autoclave, 5 short Cycles	Internal	Oct-04	Internal	Quite severe blistering at 5 cycles	I
4mm Toughcoat Print	Autoclave, 5 short Cycles	Internal	Oct-04	Internal	Some blistering	I
4mm Toughcoat Print, taped edges	Autoclave, 5 short Cycles	Internal	Oct-04	Internal	Some blistering, tape unaffected	I
Print, PE backing only	50C water soak, 30 days	Internal	Oct-04	Internal	1mm ingress	I
Print, Toughcoat + Foil edge wrap	50C water soak, 30 days	Internal	Oct-04	Internal	No change. Foil stayed intact	I
Print, Toughcoat backing	50C water soak, 30 days	Internal	Oct-04	Internal	Edge wrap fail, but no ingress	I
Toughcoat, Standard	50C water soak, 30 days	Internal	Feb-05	Internal	No Changes	I
Toughcoat, TGIC-Free	50C water soak, 30 days	Internal	Feb-05	Internal	No Changes	I
Chromatics, White	60C water soak, 60 days	Internal	Oct-06	Internal	2mm ingress in places	I
Chromatics, White, foil pretreated with Silane	60C water soak, 60 days	Internal	Oct-06	Internal	3mm ingress	I
Chromatics, Yellow	60C water soak, 60 days	Internal	Oct-06	Internal	No Changes	I
6mm Chromatics, White	Autoclave, 5 short Cycles	Internal	Nov-06	Internal	2mm ingress 2 cyles, 5mm 5 cycles	I
6mm Chromatics Black	Autoclave, 5 Cycles	Internal	Jan-07	Internal	2mm ingress 2 cyles, 5mm 5 cycles	I
6mm Chromatics, White	Autoclave, 5 Cycles	Internal	Jan-07	Internal	2mm ingress 2 cyles, 5mm 5 cycles	I
Chromatics 4mm, Black	Heat Ageing, 120C, 75 days	Pilkington Pre-production	Jan-07	Pilkington	No Change	I
Chromatics 4mm, Black	50C water soak, 30 days	Pilkington Pre-production	Jan-07	Pilkington	1mm edge delamination between coating & Glass	I
Chromatics 4mm, Black	Low Temp Cycling, 98 cycles	Pilkington Pre-production	Jan-07	Pilkington	No change	I
Chromatics 4mm, Black	Solar Irradiation, 2000 Hours	Pilkington Pre-production	Jan-07	Pilkington	1mm edge delamination between coating & Glass	I
Chromatics 4mm, White	Heat Ageing, 120C, 75 days	Pilkington Pre-production	Jan-07	Pilkington	No Change	I

Product	Test	Reference	Date	Tested by	Result	Certified or Indicative?
Chromatics 4mm, White	Solar Irradiation, 2000 Hours	Pilkington Pre-production	Jan-07	Pilkington	7mm edge delamination between coating & Glass	I
Chromatics 4mm, White	Low Temp Cycling, 98 cycles	Pilkington Pre-production	Jan-07	Pilkington	No change	I
Chromatics 4mm, White	50C water soak, 30 days	Pilkington Pre-production	Jan-07	Pilkington	5mm edge delamination	I
Chromatics, Black	50C water soak, 30 days	Internal	Jan-07	Internal	No Changes	I
Chromatics, White	50C water soak, 30 days	Internal	Jan-07	Internal	No Changes	I
Chromatics, Black	50C water soak, 30 days	Internal	Feb-07	Internal	No Changes	I
Chromatics, White	50C water soak, 30 days	Internal	Feb-07	Internal	No Changes	I
Chromatics, White, extra thick colour coat (double pass)	Autoclave, 5 Cycles	Internal	Feb-07	Internal	Bad delamination up to 30mm	I
Chromatics, White, foil pretreated with Silane	Autoclave, 5 Cycles	Internal	Feb-07	Internal	Delamination to 5mm	I
4mm Chromatics Black	Boil Test	Internal	Mar-07	Internal	No Change, 6 Hours	I
4mm Chromatics White	Boil Test	Internal	Mar-07	Internal	No Change, 6 Hours	I
Chromatics 4mm, Black	Solar Irradiation, 2000 Hours	Pilkington Pre-production	May-07	Pilkington	Large-scale delamination, test terminated 700Hours	I
Chromatics 4mm, Black	50C water soak, 30 days	Pilkington Pre-production	May-07	Pilkington	No Change	I
Chromatics 4mm, White	Solar Irradiation, 2000 Hours	Pilkington Pre-production	May-07	Pilkington	Large-scale delamination, test terminated 700Hours	I
Chromatics 4mm, White	50C water soak, 30 days	Pilkington Pre-production	May-07	Pilkington	No Change	I
Suncool Blue Chromatics	35/75 @ 100% humidity, 300 Cycles	Tests E	1990?	Pilkington	No Change	I
Suncool Blue Chromatics	Heat Ageing, 120C, 75 days	Tests E	1990?	Pilkington	No Change	I
Suncool Blue Chromatics	Solar Irradiation, 2000 Hours	Tests E	1990?	Pilkington	No Change	I
Suncool Blue Chromatics	Low Temp Cycling, 98 cycles	Tests E	1990?	Pilkington	No Change	I

Product	Test	Reference	Date	Tested by	Result	Certified or Indicative?
Suncool Blue Chromatics	SO2 Test (Kesternich) 30 Cycles	Tests E	1990?	Pilkington	4mm Ingress	I
Suncool Bronze Chromatics	35/75 @ 100% humidity, 300 Cycles	Tests E	1990?	Pilkington	No Change	I
Suncool Bronze Chromatics	Heat Ageing, 120C, 75 days	Tests E	1990?	Pilkington	No Change	I
Suncool Bronze Chromatics	Solar Irradiation, 2000 Hours	Tests E	1990?	Pilkington	No Change	I
Suncool Bronze Chromatics	Low Temp Cycling, 98 cycles	Tests E	1990?	Pilkington	No Change	I
Suncool Bronze Chromatics	SO2 Test (Kesternich) 30 Cycles	Tests E	1990?	Pilkington	No Change	I
Suncool Silver Chromatics	35/75 @ 100% humidity, 300 Cycles	Tests E	1990?	Pilkington	No Change	I
Suncool Silver Chromatics	Heat Ageing, 120C, 75 days	Tests E	1990?	Pilkington	No Change	I
Suncool Silver Chromatics	Solar Irradiation, 2000 Hours	Tests E	1990?	Pilkington	No Change	I
Suncool Silver Chromatics	Low Temp Cycling, 98 cycles	Tests E	1990?	Pilkington	No Change	I
Suncool Silver Chromatics	SO2 Test (Kesternich) 30 Cycles	Tests E	1990?	Pilkington	No Change	I
6mm Chromatics Black	Thermal stability test	Internal	2008	Internal	No break at temperature difference >80C	I
6mm Chromatics Graphite	Thermal stability test	Internal	2008	Internal	No break at temperature difference >80C	I
Chromatics Interior	Fire Propagation	BS476 (part 6)	2000	Warrington Fire Research	Class O	I
Chromatics Interior	Surface Spread of Flame	BS476 (part 7)	2000	Warrington Fire Research	Class O	I
Chromatics (4mm)	Soft Body Impact	BSEN 12601	May-07	Pilkington	Class 3(B)3	I
Chromatics (4mm)	Soft Body Impact	BSEN 12601	May-07	Wintech	Class 3(B)4	C
Chromatics (4mm)	Soft Body Impact	BSEN 12600	Jul-07	Wintech	Class 3(B)3	C
Chromatics 6mm	Soft Body Impact	BSEN 12602	Sep-07	Pilkington	Class 2(B)2	I
Chromatics Interior 4mm + foam	Soft Body Impact	BSEN 12603	Oct-07	Pilkington	Class 1(B)1	I

Performance Tests

Mechanical Tests

Notes