High performance ECO range

Biobased epoxy resins

INFUSION / RTM

Resin	Biocontent %[1]	Gel time[2]	Viscosity[3]	T_G[4]	Flexion modulus[4]	Max strength[4]	Elongation[5]
1050 ECO	34 %	13h13 to 3h09	239 to 259 mPa.s	67 to 73 °C	2.9 to 3.1 GPa	96 to 111 MPa	8.5 to 13.4 %
1800 ECO	43 %	4h53 to 42min	258 to 348 mPa.s	82 to 102 °C	2.9 to 3.1 GPa	82 to 93 MPa	3.5 to 4.3 %

LAMINATION / STRATIFICATION

Resin	Biocontent %[1]	Gel time[2]	Viscosity[3]	T_G[4]	Flexion modulus[4]	Max strength[4]	Elongation[5]
1020 ECO	40 %	11h30 to 13min	205 to 457 mPa.s	55 to 75 °C	2.5 to 2.9 GPa	83 to 113 MPa	7.7 to 15.3 %
1050 ECO	36 %	2h26 to 13min	270 to 537 mPa.s	71 to 86 °C	3.0 to 3.2 GPa	107 to 128 MPa	6.5 to 10.5 %
1070 ECO	43 %	28min	700 mPa.s	74 °C	3.2 GPa	110 MPa	7.4 %
1600 ECO	40 %	2h50	430 mPa.s	-40 °C	2.5 MPa (Traction)	1.4 MPa (Traction)	81.0 % (Traction)
1700 ECO	63%	1h12	428 mPa.s	98 °C	3.0 GPa	120 MPa	7.2 %

Biobased Hardener

PULTRUSION

Resin	Biocontent %[1]	Gel time at 80°C	Viscosity[3]	T_G[4]	Traction modulus[4]	Max strength[4]	Elongation[5]
1400 ECO	28 %	4h to 1h10	690 mPa.s	145 °C	3.2 GPa	88 MPa	6.0 %

ADHESIVE / ADHESIF

Resin	Biocontent %[1]	Gel time[2]	Viscosity[3]	T_G[4]	Flexion modulus[4]	Max strength[4]	Elongation[5]
2040G ECO	60 %	1h51 to 24min	-	57 to 67 °C	1.8 to 2.7 GPa	40 to 46 MPa	2.0 to 5.5 %
3350 ECO	26 %	26min	30 000 mPa.s	68 °C	1.9 GPa	56 MPa	7.8 %

Biobased Hardener

WATER BASED / PHASE AQUEUSE

Resin	Hardener	Biocontent %[1]	Gel time[2]	T_G[4]	Dry to touch	Surface aspect
1010 ECO	1014 or 1016	32 %	1h50	77 °C	30min	glossy or mat

FAIRING FILLER / ENDUITS

Resin	Biocontent %[1]	Gel time[2]	Density[3]	T_G[4]	Max thickness without sagging
8050 ECO	25 %	18min	0.80	68 °C	25 mm

Biobased Hardener

ART & DECORATION

Resin	Biocontent %[1]	Gel time[2]	Viscosity[3]	T_G[4]	Maximum thickness on cubic volume at 23°C
WWA ECO	37 %	24h	300 mPa.s	50 °C	9 cm

FOAMING / MOUSSAGE

Resin	Biocontent %[1]	Gel time at 80°C	Dry to touch at 50°C	T_G[4]	Mix density at 23°C after foaming
3080 M35 ECO	30 %	20min	45min	90 °C	0.35

FIRE PROTECTION / PROTECTION FEU

Resin	Biocontent %[1]	Gel time[2]	Viscosity[3]	T_G[4]	Application
2010 FR ECO	17 %	2h42	28 480 mPa.s	69 °C	One coat of 300 to 500 µm to obtain self-extinguishing properties

[1] ratio of the number of biobased carbon atoms / the number of total carbon atoms on resin part
[2] 70mL, 4 cm high, 23°C
[3] at 23°C
[4] on pure resin, fully cured
[5] at break

RESOLTECH has become internationally recognized as a major manufacturer within the Epoxy and Polyurethane resin industry, with highly innovating and technically advanced products. With its new «ECO» range, RESOLTECH, in addition to exclude CMR products from its formulations, provides to its customer biobased technical solutions.

Biobased amine hardeners can be made from vegetable oils. Mention may be made of rapeseed, soya, linseed, tall or cashew nut oils.
Biobased epoxy resins can also be made from vegetable oils mentioned for hardeners, but also from glycerine.

RESOLTECH est internationalement reconnu comme un acteur majeur dans la production de systèmes époxy et polyuréthanes innovants avec de très hautes performances techniques. Avec sa gamme «ECO», RESOLTECH, en plus d'exclure les composants CMR de ses formulations, fournit à ses clients des solutions techniques biosourcées.

Les durcisseurs amines biosourcés sont essentiellement produits à partir d'huiles végétales. On peut citer les huiles de colza, de soja, de lin, de tall et de noix de cajou (cardanol).
Les résines époxy biosourcées peuvent aussi être synthétisées à partir d'huiles végétales citées pour les durcisseurs, mais aussi à partir de glycérine.

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