



HexBond™ ST1035

Epoxy Film Adhesive



Product Data Sheet

Description

HexBond™ ST1035 adhesive film is a 120°C/248°F cure modified epoxy film supported (moisture-resistant polyester carrier) or unsupported.

Standard areal weights are 150, 250 and 300 g/m². 75, 100, 200, 400 and 450 g/m² films are also available on demand. Designed for the manufacture of sandwich structures from a various types of skins and cores and for bonding a wide range of substrates (metals, plastics, reinforced plastics and composite structures, marble, etc.).

Features

- Excellent balance between peel and shear in the range of -55°C/-67°F to 120°C/248°F
- Very flexible cure temperature from 90°C/194°F to 160°C/320°F and processing methods (press, oven or autoclave)
- Good tack for easy adhesive joint assembly

Applications

- Sandwich construction
- Metal to metal bonding
- Composite to composite bonding
- Metal to composite bonding

Form

- The film is protected on one side by a polyethylene film and on the other side by a release paper

Reference	Areal Weight (g/m ²)	Carrier	Width (mm)	Roll surface (m ²)
ST 1035 75 g/m ² unsupported	75 g/m ² ± 15	-	1270	101.6
ST 1035 100 g/m ² unsupported	100 g/m ² ± 15	-	1270	101.6
ST 1035 100 g/m ² supported	100 g/m ² ± 15	Polyester non-woven (17 g/m ²)	1270	101.6
ST 1035 150 g/m ² unsupported	150 g/m ² ± 20	-	1270	101.6
ST 1035 150 g/m ² supported	150 g/m ² ± 20	Polyester non-woven (17 g/m ²)	1270	101.6
ST 1035 200 g/m ² unsupported	200 g/m ² ± 25	-	1270	101.6
ST 1035 200 g/m ² supported	200 g/m ² ± 25	Polyester non-woven (17 g/m ²)	1270	101.6
ST 1035 250 g/m ² unsupported	250 g/m ² -0 / +30	-	1270	101.6
ST 1035 250 g/m ² supported	250 g/m ² -0 / +30	Polyester non-woven (17 g/m ²)	1270	101.6
ST 1035 300 g/m ² unsupported	300 g/m ² ± 30	-	1270	101.6
ST 1035 300 g/m ² supported	300 g/m ² ± 30	Polyester non-woven (17 g/m ²)	1270	101.6
ST 1035 400 g/m ² supported	400 g/m ² ± 40	Polyester non-woven (17 g/m ²)	1270	69.85
ST 1035 450 g/m ² unsupported	450 g/m ² ± 45	-	1270	69.85



Instructions for use

Refer to the Safety Data Sheet before handling.

- To avoid any moisture, allow the adhesive to warm to room temperature before opening the waterproof polyethylene bag.
- Bonding surfaces should be clean, dry and properly prepared.
- Cut the film to the shape and size required.
- Remove the release paper and position the adhesive on the prepared bonding surface.
- Remove the polyethylene backing sheet.
- Complete the joint assembly and proceed to the curing.

Curing

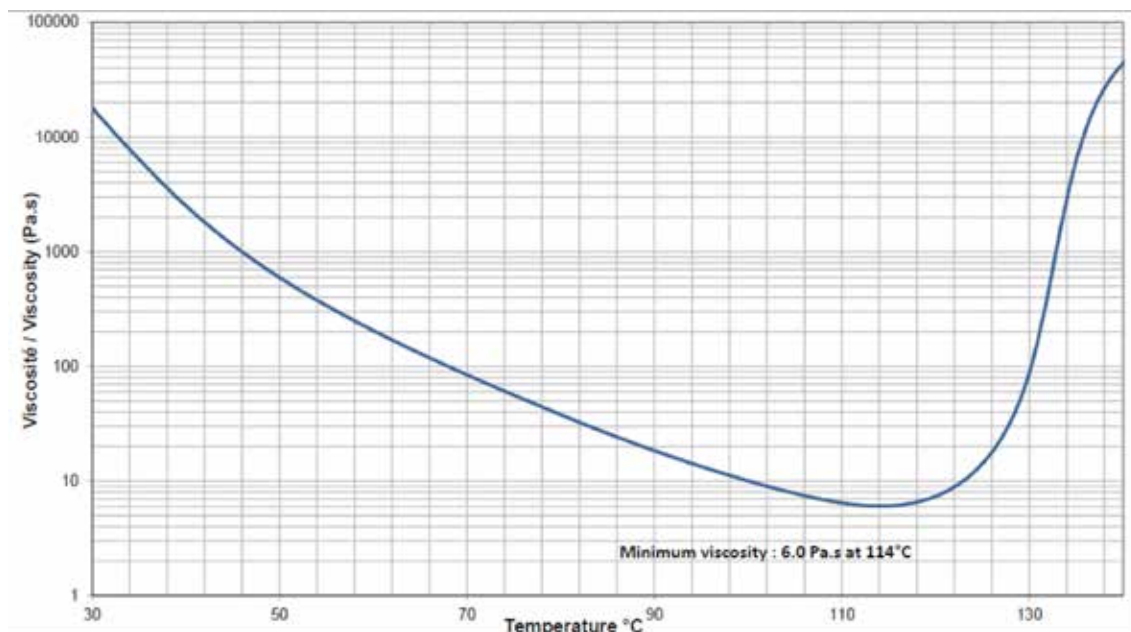
- Typical cure cycle : 60 minutes at 120°C/248°F
- Alternative cure cycles :

Temperature (°C/°F)	150 / 302	140 / 284	130 / 266	120 / 248	110 / 230	100 / 212	90 / 194
Time (min)	10	20	40	60	150	300	600

- Recommended heat up rate: 0.5 to 5.5°C/min (1 to 10°F/min)
- Recommended pressure: 1.5 to 3.5 bar (22 to 51 psi) during whole cycle.
- For sandwich structures the pressure application should be selected to suit the type of core and skins being used.
- Enough time should be allowed for heat to penetrate evenly through the assembled parts to ensure that the adhesive reaches that temperature before timing starts.
- Cool down the components to below 70°C before releasing the pressure.

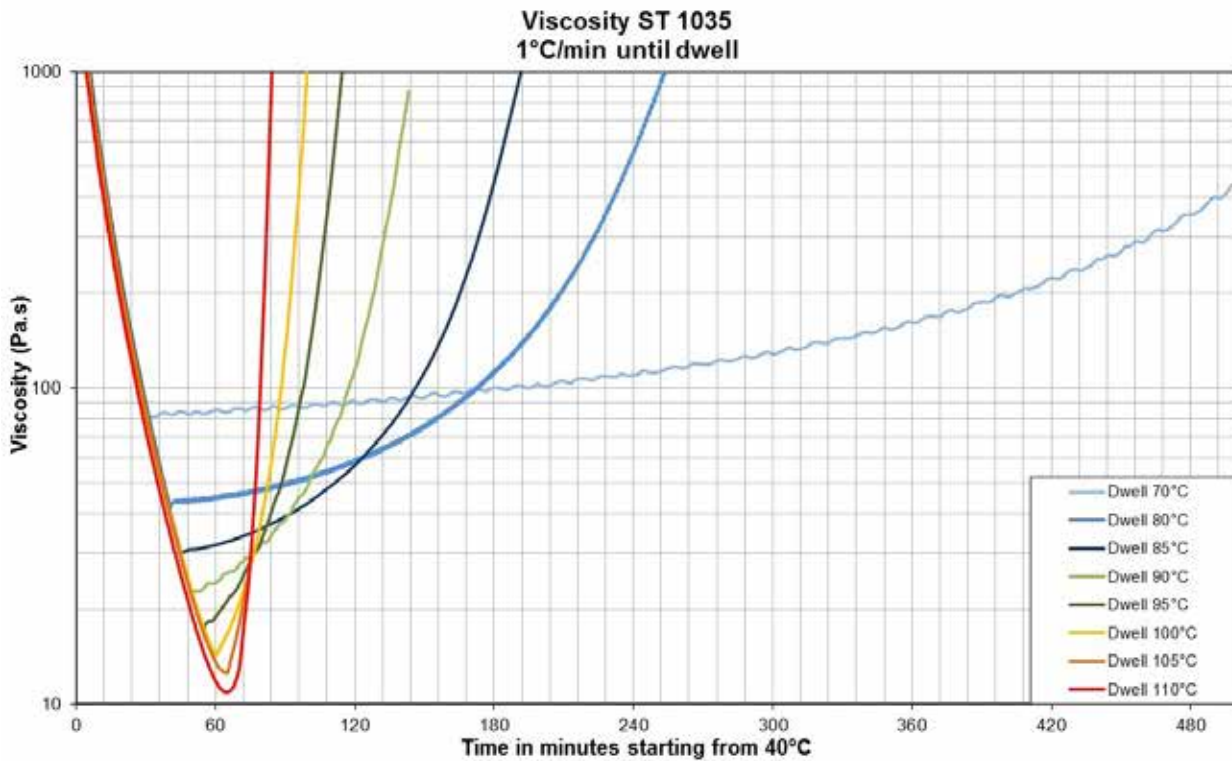
Resin properties

- Rheology profile (Heat up rate : 2°C / min) :





- Viscosity versus temperature :



Mechanical properties

Test	Environmental conditioning	Test temperature (°C/°F)	Typical values			
			150 g/m ² supported	250 g/m ² supported	300 g/m ² supported	300 g/m ² unsupported
Lap shear strength ⁽¹⁾ (MPa)	None	23 / 73	33	34	41	43
		70 / 158	29	31	33	37
		120 / 248	16	16	18	19
	70°C 85% RH (1000hrs.)	23 / 73	25	30	33	31
		70 / 158	15	20	18	18
Climbing Drum Peel ⁽²⁾ (Lower skin) (mN/m)	None	23 / 73	-	54	65	-



HexBond™ ST1035

Epoxy Film Adhesive



Product Data Sheet

Shelf life / Out life

- Shelf Life: 24 months at -18°C
- Out life : 4 weeks at 23°C

Handling precautions

- Usual precautions necessary when handling synthetic resins should be observed.
- Safety Data Sheet is available on request.

For more information

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- | | | |
|------------------------------------|--|---|
| ● HexTow® carbon fibers | ● HexFlow® RTM resins | ● Engineered core |
| ● HexForce® reinforcements | ● Redux® & HexBond™ adhesives | ● Engineered products |
| ● HiMax™ multiaxial reinforcements | ● HexTool® tooling materials | ● Polyspeed® laminates & pultruded profiles |
| ● HexPly® prepregs | ● HexWeb® honeycombs | ● HexAM™ additive manufacturing |
| ● HexMC® molding compounds | ● Acousti-Cap® sound attenuating honeycomb | |

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

<http://www.hexcel.com/contact/salesoffice>

©2018 Hexcel Corporation – All rights reserved. Hexcel Corporation and its subsidiaries ("Hexcel") believe that the technical data and other information provided herein was materially accurate as of the date this document was issued. Hexcel reserves the right to update, revise or modify such technical data and information at any time. Any performance values provided are considered representative but do not and should not constitute a substitute for your own testing of the suitability of our products for your particular purpose. **Hexcel makes no warranty or representation, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, and disclaims any liability arising out of or related to, the use of or reliance upon any of the technical data or information contained in this document.**