

INTRODUCTION

SPECIFIC POLYMERS' range of epoxy resins redefines industry standards by **introducing advanced epoxy formulations** entirely **free from bisphenol derivatives**. Harnessing the unique characteristics of their core ingredients, our solutions offer the **essential properties to meet end-users' requirements**.



SP-3449_C, SP-3645_C & SP-3646_C alternatives to diluted DGEBA

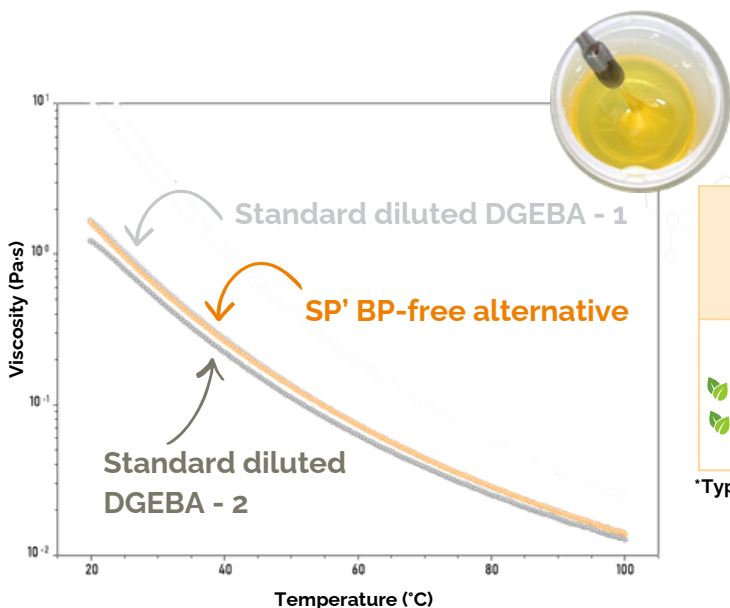
Leading our innovations, **SP's BP-free epoxy resins** represent ideal **alternatives** to standard **DGEBA-based diluted resins**, providing comparable **viscosity profiles**, enhanced **reactivity**, and equivalent **performance** when combined with conventional hardeners. While **SP-3449_C** is derived from **depletable resources**, **SP-3645_C** & **SP-3646_C** **push the boundaries**, delivering **same performances** with an unparalleled **biobased carbon content** of **up to 76 %**. **SP-3449_C** and biobased references **SP 3645_C** & **SP-3646_C** are particularly suitable for **RTM** and **infusion processes**.

KEY FEATURES

1. Bisphenol-free resins
2. Product grades available with biobased carbon content ranging from **0 to 76 %**
3. Orange viscous liquids at room temperature
4. Comparable viscosity and performance to standard DGEBA-based diluted resin
5. Improved reactivity compared to standard diluted resins

TYPICAL DATA OF NEAT RESIN & VISCOSITY PROFILE

Reference	Characteristic	Biobased carbon content (%)	Epoxy content (meq/g)	Epoxy Eq. Weight (g/eq)	Viscosity at 25°C (mPa.s)	Application
SP-3449_C SP-3645_C SP-3646_C	Low viscosity BP-free epoxy resin	0 ; 36 ; 76	7.3 - 8.2	118 - 139	700 - 1200	Low viscosity versions suitable for infusion and RTM processes



Reference	Viscosity (mPa.s)*					
	20 °C	25 °C	30 °C	40 °C	60 °C	80 °C
SP-3449_C SP-3645_C SP-3646_C	1610	950	600	270	73	28

*Typical data

SP's BP-FREE ALTERNATIVE & HARDENERS



System		Rheology	Reactivity			Thermomechanical properties
Hardener	Epoxy	Mix η @25°C (mPa.s)	Tonset (°C)	Tpeak (°C)	Gel time @80°C / 25°C	T _g (°C)
Aromatic hardener	SP-3449_C	720	140	180	80°C : 3 h	180
Infusion hardener 1	Diluted DGEBA	190	93	130	--	85
	SP-3449_C	210	80	116	--	105
Infusion hardener 2	Diluted DGEBA	230	90	130	80°C : 40 min	73
	SP-3449_C	230	75	115	80°C : 12 min	100
Infusion hardener 2	Diluted DGEBA	150	88	125	--	80
	SP-3449_C	160	73	107	25°C : > 4 h	113
Cystamine (Dynamic hardener) SP-2-4-001	Diluted DGEBA	--	93	140	--	73
	SP-3449_C	200	70	100	25°C : > 2,6 h	76