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EPOLEC®TUPH™ RESIN

■ INTRODUCTION

Epolec® Tuph™ series are modified epoxy resins developed by Epotech Composite Corporation. The pre-reaction of bisphenol A type epoxy resin with the hydroxyl groups of specific high molecular weight thermal plastic elastomer, which has high softening temperature and extremely strong tear strength and modulus, imparts excellent toughness and breaking elongation of composite matrix under a higher load.

For a unidirectional continuous fibre reinforced composite, there is no doubt of the high tensile properties in the fibre direction. However, the transverse properties are generally low since the dependence upon the properties of matrix and the bond strength between resin and fibres. The elongation before breaking in the transverse direction is also smaller than in longitudinal direction. Thus, even if a quasi-isotropic laminate, it is first failed in the off-axial direction due to the much lower transverse properties. Therefore the mechanical properties in the longitudinal direction of the laminate cannot be sufficiently developed. By contrast, elongation could be enhanced if the elastic modulus of matrix is lowered. But the compressive properties would be degraded as well as the flexural properties would be influenced. The attendance of *Epolec® Tuph™* resin is to enhance the strength and elongation of composite in the transverse direction without lowering its elastic modulus. The depression of thermal properties of composite due to the adding of *Epolec® Tuph™* resin could be minimised as well.

■ PACKAGE

5 gallon barrel.

■ Important

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