

Product Data Sheet

Atlac Premium 450

Chemical/physical nature

Atlac Premium 450 is a medium viscous, high reactive, thixotropic light curing vinylester resin dissolved in methacrylates.

Major applications

Atlac Premium 450 has been especially developed for the Blue LED cure pipe rehabilitation process.

Principal properties

The chemical composition of Atlac Premium 450 is responsible for good hydrolysis and chemical resistance performance.

Product specifications upon delivery

Property	Range	Unit	TM
Peak time	3.5 - 6.5	min	2500
Peak temperature	115 - 125	°C	2500
Appearance	Hazy	-	2265
Viscosity at 2 s-1	2500 - 3500	mPa.s	2313
Viscosity at 20 s-1	1000 - 1400	mPa.s	2313
Viscosity at 50 s-1	900 - 1100	mPa.s	2313
Viscosity at 250 s-1	800 - 1000	mPa.s	2313

Remarks

TM2313: Physica, spindle Z2, 23°C, 250 s⁻¹ = Z3.

Properties of the liquid resin (typical values)

Property	Value	Unit	TM
Density, 23°C	1100	kg/m ³	2160
Colour on sight	Yellow	-	-
Flash point	113	°C	2800
Stability, no init., dark, 25°C	6	months	-

Properties of cast unfilled resin (typical values)

Property	Value	Unit	TM
Tensile strength	70	MPa	ISO 527-2
Tensile E-modulus	3.4	GPa	ISO 527-2
Elongation at break	2.6	%	ISO 527-2
Heat Deflection Temp. (HDT)	103	°C	ISO 75-A

Remarks

Cured with 3.0% Accelerator NL-49P + 2% Butanox M-50 + 2% Accelerator NL-63-10P. Post cured 24 hrs at RT followed by 24 hrs 60°C and 24 hrs 80°C.

Remarks on curing agents

All curing agents mentioned are AKZO Nobel products:

Butanox M-50 is Methyl ethyl ketone peroxide, solution in dimethyl phthalate. Accelerator NL-49P is Cobalt(II) 2-ethylhexanoate, 1% Co, in solvent mixture. Accelerator NL-63-10P is N,N-Dimethyl aniline, 10% solution in 2,2,4-trimethyl-1,3-pentenediol diisobutanoate.

Guidelines before use

Stir the resin before use.

Storage guidelines

The resin should be stored in a dark and dry place at temperatures between 5°C and 25°C. Exposure to direct sunlight should be avoided. Shelf life is reduced at higher temperatures and the properties of the resin might change during storage.

Material Safety

A material safety data sheet for the product is available on request.

Test methods

Test methods (TM) referred to in the table(s) are available on request.

The user is held to check the quality, safety and other properties of the product referred to herein. The information and recommendations in this document are to the best of our knowledge, reliable. However, no rights whatsoever can be derived from this document or the information contained therein by any party, other than those expressly accepted by a selling entity of the Royal DSM group of companies ("DSM Selling Entity") in a binding sale and purchase agreement for product referred to herein. For the avoidance of doubt THE ROYAL DSM GROUP OF COMPANIES MAKE NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PURPOSE. Unless explicitly agreed to otherwise in writing by the DSM Selling Entity, all offers, quotations, sales and deliveries of DSM products are subject to the General Conditions of Sale of such DSM Selling Entity.

This document has been issued by DSM Composite Resins on behalf of the DSM Selling Entity. For more information: www.compositeresins.com