

Product Data Sheet

Synolite 0328-A-1

Applications

Synolite 0328-A-1 is recommended for the production of water clear castings and encapsulations.

Principal properties

Synolite 0328-A-1 is a pre-accelerated low reactivity orthophthalic acid based resin with a very gradual cure. The product has a low peak exotherm combined with a low polymerisation shrinkage and high brilliance after polymerisation. This resin is UV-light stabilised.

Product specifications upon delivery

Property	Range	Unit	TM
Viscosity, 23°C	360 - 620	mPa.s	2013
Colour, APHA	max. 70	-	2017
Solids content, IR	61.5 - 64.5	%	2033
Refractive index, 23°C	1.545 - 1.547	-	2150
Appearance	clear	-	2265
Colour	blue	-	-
Water content	Max. 1000	ppm	2350
Acid value, as such	12 - 18	mg KOH/g	2401
Gel time from 25 to 35°C	19 - 23	minutes	2625
Cure time from 25°C to peak	42 - 57	minutes	2625
Peak temperature	40 - 50	°C	2625

Remarks:

TM 2013: Z2/100s⁻¹/23°C

TM 2625: 1.0 g Butanox M50 (Akzo) in 100 g resins

Other data

Property	Value	Unit	TM
Density, 20°C	appr. 1100	kg/m ³	2160
Flash point	appr. 33	°C	2800
Stability, no init., dark, 25°C	6	months	-

Typical physical properties of cast unfilled resin

Property	Value	Unit	TM
Density, 20 °C	appr. 1100	kg/m ³	2160
Volume shrinkage	6,1	%	-
Tensile strength	56	MPa	ISO 527-2
Elongation at break	1,6	%	ISO 527-2
Flexural strength	83	MPa	ISO 178
Modulus of elasticity in tension	4,1	GPa	ISO 178
Heat deflection temperature (HDT)	55	°C	ISO 75-A
Barcol hardness	40-45	Barcol	GYZJ 934-1
Martens temperature	49	°C	DIN 53548

Guidelines before use

Before use, the resin should be conditioned at a well defined, application dependant temperature (usually 15°C minimum for a MEKP cure). Stir the product before blending.

Storage guidelines

The resin should be stored indoors in the original, unopened and undamaged packaging, in a dry place at temperatures between 5°C and 30°C.

Shelf life is reduced at higher temperatures and the properties of the resin might change during storage. The shelf life of styrene containing unsaturated polyesters will be significantly reduced when exposed to light. Store in dark and in 100% light tight containers only.

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