Synolite 4120-N-1

DSM

Product Data Sheet

a DSM Product

Applications

Synolite 4120-N-1 can be used alone or in combination with rigid resins for the manufacture of flexible products. Due to the good water resistance Synolite 4120-N-1 is eminently suitable for the production of flexible gelcoats.
Synolite 4120-N-1 can also be used in casting applications for putties, if necessary in combination with rigid resins.
Impregnating resins, particularly isophthalic resins, can be flexibilised by addition of Synolite 4120-N-1 without detracting from their chemical resistance.

Principal properties

Synolite 4120-N-1 is a very flexible unsaturated polyester resin based on isophthalic acid.
Good strength, low volume shrinkage, low water absorption and good chemical resistance are major features of Synolite 4120-N-1.

Product specifications upon delivery

Property	Range	Unit	TM
Viscosity, 23°C	500 - 650	mPa.s	2013
Colour, APHA	200	-	2017
Solids content, IR	62 - 64	%	2033
Appearance	clear	-	2265
Acid value, as such	13 - 18	mg KOH/g	2401
Gel time from 25 to 35°C	19 - 24	minutes	2625
Cure time from 25°C to peak	50 - 60	minutes	2625
Peak temperature	50 - 80	°C	2625

Remarks

TM 2013: Z2/100/23°C
TM 2625: 100 g. + 1.0g. NL 49 P + 2.0 g. Butanox M 50

Other data

Property	Value	Unit	TM
Density, 23°C	appr. 1150	kg/m³	2160
Flash point	appr. 33	°C	2800

Typical physical properties of cast unfilled resin

		Test method
Density (20°C), kg/m^3	1200	--
Volume shrinkage, %	4.5 - 5.5	--
Elongation at break, %	75 - 100	ISO 527-2
Heat deflection temperature, °C	max. 20	ASTM D 648; ISO 75 A
Water absorption, 24 h. (20°C), %	0.35	--

Guidelines before use

Before use, the resin should be conditioned at a well defined, application dependant temperature (usually 15°C minimum for a MEKP / Co 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.

Version: 001313/4.0
Date of issue: March 2005

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