

Product data

Synolite 7259-U-2

Chemical/physical nature

Synolite 7259-U-2 is an unsaturated polyester based on tetrahydrophthalic anhydride, dissolved in styrene. The resin is pre-accelerated with polymeric amines, has a medium viscosity, and a high reactivity.

Major applications

Synolite 7259-U-2 is a versatile putty resin, intended primarily for use in the manufacture of car body fillers and putties for benzoyl peroxide cure. Filler pastes made from Synolite 7259-U-2 show excellent dry sandability and do not rapidly clog sanding paper. This resin is cold-curing, even around 0°C.

Principal properties

Fillers and putties based on Synolite 7259-U-2 achieve early dry sandability, especially with sanding machines. The hardness of Synolite 7259-U-2 is equivalent to that of a 3:7 combination of the hard Synolite 9248-U-3 and the flexible Synolite 2710-U-2. Synolite 7259-U-2 is ideal for use as the sole binder for car body fillers, accepts higher filler loads, and shows excellent storage stability of derived pastes. It can be made harder by the addition of Synolite 9248-U-3 and more flexible by combination with Synolite 2710-U-2. Synolite 7259-U-2 putties show very good adhesion to various substrates, including mild steel, galvanized steel, aluminium, and polyester.

Product specifications

Property	Range	Unit	TM
Viscosity, 23°C	550 - 750	mPa.s	2013
Colour, Gardner	5 - 8	-	2017
Solids content, IR	66 - 70	%	2033
Appearance	clear	-	2265
Acid value, as such	16 - 20	mg KOH/g	2401
Gel time from 25 to 35°C	6 - 8	minutes	2625
Cure time from 25°C to peak	8 - 12	minutes	2625
Peak temperature	110 - 130	°C	2625

Remarks

The curing characteristics are obtained using 2 wt% BPO-50% Lucidol CH50L (AKZO Nobel).

Properties of the liquid resin (typical values)

Property	Value	Unit	TM
Flash point	33	°C	2800
Stability, no init., dark, 25°C	min. 6	months	-

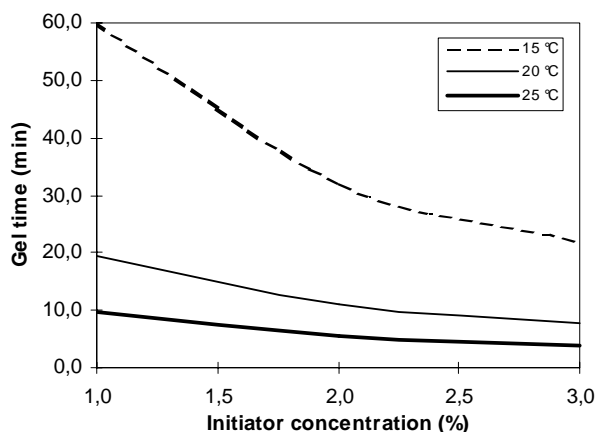
Properties of cast filled resin (typical values)

Property	Value	Unit	TM
Tensile strength	30	MPa	ISO 527-2
Tensile E-modulus	0.6	GPa	ISO 527-2
Elongation at break	25	%	ISO 527-2
Hardness	75	Shore D	2602

Remarks

Casting (4 mm) cured with 2 wt% BPO-50% Lucidol CH50L (AKZO Nobel). Postcure 6h at 60°C.

Graph showing pot life with a standard catalytic system



Remarks

Gel time of 100 g resin, using BPO-50% Lucidol CH50L (AKZO Nobel).

Formulation

Suitable extenders are talc, dolomite/calcite, crystalline chalk and barytes with a low iron content. Talc is applied as the main component because it improves sanding properties, and the adhesion to the substrate. In addition, the more spherical extenders such as dolomite, chalk and barites ensure dense packing.



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Typical starting formulation

Components	Weight
Synolite 7259-U-2	300
Thixcin E (a)	10
Finntalc M50 (b)	475
Titanium dioxide (c)	50
Barium sulphate EWO (d)	140
Styrene monomer	25
	1000

Remarks

a) Elementis Specialties, b) Mondo Minerals, c) Kronos Europe d) Sachtleben.

Putty gel time at 20°C with 2 wt% BPO-50% paste (AKZO Nobel Lucidol BT-50): 4-5 minutes.

Processing

This putty resin cures by the addition of benzoyl peroxide (BPO), without the application of external heat.

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. 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.



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