SYNOLITE™ 0542-U-2

CHEMICAL/PHYSICAL NATURE

Synolite™ 0542-U-2 is an unsaturated polyester based on DCPD, dissolved in styrene. The resin is pre-accelerated with polymeric amines, has a medium viscosity, and a medium reactivity.

MAJOR APPLICATIONS

Synolite™ 0542-U-2 is designed for use in the manufacturing of car repair putties, providing rapid early cure and tack-free surface when cured.

PRINCIPAL PROPERTIES

Synolite™ 0542-U-2 has a medium viscosity, and medium reactivity. It gives very good wetting of fillers. After curing, the resin is semi-rigid, facilitating fast surface curing combined with a high resistance to heat deflection. The polymeric amine curing system allows rapid through hardening, also at lower temperatures. In addition, staining of coatings applied on the putty is strongly reduced due to this state of the art curing system. Storage stability of putties made from Synolite™ 0542-U-2 is excellent. Synolite™ 0542-U-2 putties show very good adhesion to metal substrates, wood and polyester.

PRODUCT SPECIFICATIONS UPON DELIVERY

Property	Range	Unit	TM
Viscosity, 23°C	640 - 780	mPa.s	2013
Solids content, IR	62 - 65	%	2033
Appearance	clear	-	2265
Stability	> 180	Minute	2300C
Acid value, on solid	6 - 12	mg KOH/g	2401
Gel time from 25 to 35°C	7.5 - 9.5	Minute	2625
Cure time from 25°C to peak	10-13	Minute	2625
Peak temperature	130 - 150	°C	2625
Hardness, 20 g	64 - 72	Shore D	5203
Hardness, 70 g	28 - 36	Shore D	5203

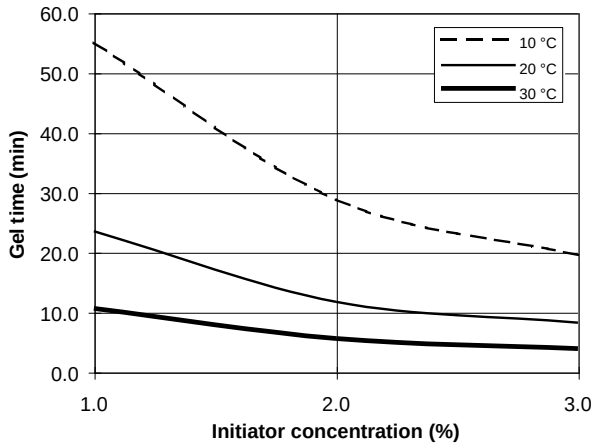
REMARKS

TM 2013: Physica MC1+ \ Z 2 \ 100s-1 \ 23°C
TM 2625: 100g resin + 2.0g Perkadox CH 50
TM 5203: 100g resin + 1g BPO 50% paste (Perkadox BT 50)

PROPERTIES OF THE LIQUID RESIN (TYPICAL VALUES)

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

GRAPH SHOWING CURING CHARACTERISTICS WITH A STANDARD CATALYTIC SYSTEM



REMARKS

TM 2625, reactivity (DIN 16.945) of UP resins. With BPO-50% Perkadox CH50L (AKZO Nobel).

TYPICAL STARTING FORMULATION FOR SMC-PASTE

Component	Weight
Synolite™ 0542-U-2	30.00
Thixcin E, Rheox	1.00
Micro-Talc FGT-200, Norwegian Talc	47.50
Titanium dioxide, Kronos 2160	5.00
Barium Sulphate EWO	14.00
Styrene monomer	2.50

PROCESSING

This putty resin cures by the addition of benzoyl peroxide (BPO), without the application of external heat. For soft sanding car repair putties, this semi-rigid putty resin may be blended with the flexible resin Synolite™ 5241-X-1.
The recommended ratio is:
Synolite™ 0542-U-2 70 parts by weight
Synolite™ 5241-X-1 30 parts by weight

GUIDELINES BEFORE USE

Before use, the resin should be conditioned at a well-defined, application dependent 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 and the properties might change during storage. Shelf life is reduced at higher temperatures and the properties of the resin might change during storage. The shelf life of monomer 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 of this product is available on request.

TEST METHODS

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

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PRODUCT INQUIRY? PLEASE CLICK HERE

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