SYNTHALAT F 477

(technical data sheet)

Characteristics

Air-drying medium-oil alkyd resin

Composition

Oil content: approx. 50 % (drying fatty acids)

Supplied as

(SYNTHALAT F 477 is available in different forms. Details and data of these variations can be found on the following pages.)

Use

SYNTHALAT F 477 is used for fast-drying industrial paints with good gloss retention, e.g. machine and vehicle coatings. Without addition of cobalt, it is suitable for radiator paints with low yellowing tendency.

Solubility

Petroleum spirit 100/140	x	White spirit	+
Turpentine oil	+	Toluene	+
Xylene	+	Solvent naphtha	+
Trichloroethylene	+	Ethyl acetate	+
Butyl acetate	+	Methyl ethyl ketone	+
Methyl isobutyl ketone	+	Ethyl glycol	x
Butyl glycol	+	Methyl glycol acetate	+
Ethyl glycol acetate	+	Ethanol	-
Butanol	-	Diacetone alcohol	-

+	=	dilutable
x	=	largely dilutable
o	=	limited dilutability
-	=	very limited dilutability or not dilutable

Compatibility

Linseed oil	+	Alkyl/terpene phenolic resins	+
Linseed oil-stand oil 30 P	o	Ketone resins	+
Linseed oil-stand oil 90 P	-	Unplast. urea resins	+
Short-oil non-drying alkyds	o	Unplast. melamine resins	+
Short-oil drying alkyds	+	Chlorinated vinyl polymers	o
Medium-oil drying alkyds	+	Chlorinated rubber	+
Long-oil drying alkyds	+	Cyclorubber	-
Epoxy ester	-	Ester-soluble nitrocellulose	o
Maleic resins	+	Zinc oxide	+
Phenolic-mod. colophony (rosin)	+		

+	=	compatible
x	=	largely compatible
o	=	limited compatibility
-	=	very limited compatibility or not compatible

Properties and Processing

With SYNTHALAT F 477 it is possible to obtain synthetic resin enamels with fast initial and through-drying, high elasticity, high gloss and excellent weathering resistance.
When oven-drying a 30-40 µm layer, drying degree “T4” (according to DIN 53150) is obtained after 30 min at 80°C. Recoatability is obtained after another 16 hours at room temperature. Then the film exhibits good resistance to commercially available self-adhesive tapes.

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Geschäftsführung:
Dr. Henning Ziemer
(Sprecher der Geschäftsführung)
Hubert Starzonek
Dr. Günter Koch

There is very good compatibility to melamine resins, so it is possible to formulate paints which are appropriate for hardening at 80°C.

There is also compatibility to drying long-oil as well as to drying short-oil alkyd resins, in any ratio of mixture. Primers and paints with zinc oxide show good storage stability.

For drying we recommend the cobalt containing dryer combinations Octa Soligen 173 and Octa Soligen 203; as cobalt-free alternative, one can use the iron dryer Oxy Coat 1101 in combination with Zr/Ba or Li.

Supplied as

50 % in "Shellsol D 40"

(due to production-related reasons, the product contains approx. 2 % xylene)

Properties

Non-volatile content (nvc) (as supplied)	50 +/- 1 %
Flow time (DIN cup, 4 mm, 20°C) (diluted to 40 % with "D 40")	90 - 130 sec
Acid value (in mg KOH / g) (relative to nvc)	max. 12
Colour value (iodine) (diluted to 40 % with "D 40")	max. 10

Supplied as

55 % in "Shellsol D 40"

(due to production-related reasons, the product contains approx. 2 % xylene)

Properties

Non-volatile content (nvc) (as supplied)	55 +/- 1 %
Flow time (DIN cup, 4 mm, 20°C) (diluted to 40 % with "D 40")	90 - 130 sec
Acid value (in mg KOH / g) (relative to nvc)	max. 12
Colour value (iodine) (diluted to 40 % with "D 40")	max. 10

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Supplied as

50 % in “LG“

The term “LG” designates a solvent blend consisting of low boiling aliphatic white spirit (predominantly C9/C10) and light aromatic solvent naphtha in a ratio of 4:1

This composition is equivalent to the past form of delivery
„Synthalat F 477, 50% in white spirit K21“.

Properties

Non-volatile content (nvc) (as supplied)	50 +/- 1 %
Flow time (DIN cup, 4 mm, 20°C) (diluted to 40 % with “K 21“)	40 - 45 sec
Acid value (in mg KOH / g) (relative to nvc)	max. 10
Colour value (iodine) (diluted to 40 % with “K 21“)	max. 10

Supplied as

55 % in white spirit “K 30“ / xylene (3:1)

Properties

Non-volatile content (nvc) (as supplied)	55 +/- 1 %
Flow time (DIN cup, 4 mm, 20°C) (diluted to 40 % with “K 30“)	75 - 95 sec
Acid value (in mg KOH / g) (relative to nvc)	max. 10
Colour value (iodine) (diluted to 40 % with “K 30“)	max. 10

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