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TECHNICAL DATA

SYNTHITE® AC-43

Solvent-Based Polyester Air-Drying Varnish Clear

DESCRIPTION

AC-43 is a one-pack modified polyester air-drying varnish that cures rapidly to provide a tough, clear, gloss, chemically resistant film. It may also be baked in the oven for increased toughness, flexibility and faster throughput.

ADVANTAGES

→ UL Certified– File OBOR2.E317427
→ Included in UL Electrical Insulation Systems up to 180°C – File OBJS2.E317429
→ Suitable for use up to 180°C (Class H) - UL File OBOR2.E317427
→ Fast drying
→ Good bond strength
→ Excellent resistance to high humidity, oils & chemicals, including acids & alkalis
→ Solderable cured film – PCB applications
→ Low viscosity - good penetration
→ Easily applied via brush, dip, or spray
→ Also available in Golden (AC-43/261-D), Red (ER-43/368-D), Black (EB-43/387-D) & Grey (EG-43/698-D)

APPLICATIONS

→ Transformers → Resistors → Printed circuit boards → Electric motor stators
→ Capacitors

PHYSICAL PROPERTIES	
Colour	Clear
Specific gravity @ 25°C	880 ± 50g/L
Viscosity, Ford No4 Cup @ 25°C	20 - 26 seconds
Viscosity, BS B4 Cup @ 25°C	26 - 30 seconds
Build, DFT (ASTM D-115)	0.060 - 0.070mm
Air-drying time @ 20°C - surface dry for handling	10 minutes
Air-drying time @ 20°C - tack-free	1 hours
Corrosive effect on copper	None
Thinner	PAR T2, PAR M6039 or Dolph's T-200
Shelf life @ 25°C in original closed containers	24 months
Pack sizes	1, 5, 25, 200 Litre, DOLPH-SPRAY® Aerosols
ELECTRICAL PROPERTIES	
Electric strength, dry (ASTM D-115)	2,000 Volts/0.025mm
Electric strength, 24 hours in water (ASTM D-115)	1,200 Volts/0.025mm
CTI (IEC 60112)	600 M

THERMAL CLASSIFICATION (UL 1446)

ANSI Wire Type	Twisted Pair	Helical Coil
MW24	155°C	155°C
MW28	130°C	130°C
MW35	180°C	180°C

CHEMICAL RESISTANCE (ISO 2812 METHOD 2, 168 HOUR EXPOSURE)	Blistering	Rusting	Cracking
Water	0	0	0
Acid, 10% sulphuric	0	0	0
Alkali, 1% sodium hydroxide	0	0	0
Salt water	0	0	0
Transformer oil, ASTM D-115 & IEC 60296	Passed	Passed	Passed

Tests performed on 0.030mm dry film cured for 24 hours at 25°C plus 24 hours @ 60°C.
Evaluation according to ISO 4628/2-3-4.

APPLICATION

BRUSH, DIP OR SPRAY

AC-43 may be applied via brush, dip or spray as supplied.

CONVEYER IMPREGNATION

1. Thin by 10 - 15%.
2. Pre-heat unit for 10 minutes at 110°C. (Not always necessary).
3. Dip for 30 seconds.
4. Drain for 10 - 20 minutes.
5. Cure in the oven as for 60 - 90 minutes at 110°C.

CURE SCHEDULE

AC-43 is designed to air-dry at ambient temperatures, but may be cured in the oven to increase through-put.
Curing in the oven will provide a film of optimum toughness and bond strength with improved resistance to chemicals and oil.

Surface dry @ 20°C	10 minutes
Hard dry @ 20°C	1 hour
Full properties @ 20°C	72 hours
Oven curing @ 150°C	20 - 30 minutes

DIP TANK STABILITY

AC-43 has proven stability in atmospheric dip tanks, but being an air-drying product that cures through oxidisation, the tank must be covered when not in use.
If the varnish is not used for more than 10 - 15 days, is it recommended that the surface of the varnish be covered with Thinner without mixing.
Before using the tank again, the varnish must be thoroughly mixed.

HEALTH & SAFETY

Before use, please refer to Material Safety Data Sheets (MSDS).