



- TECHNICAL DATA SHEET -

**SYNTHITE AC-43**  
(Clear Air Drying Varnish 180°C)

**DESCRIPTION**

SYNTHITE AC-43 is a high temperature, modified polyester air drying varnish which is suitable for class H applications. Synthite AC-43 air dries very quickly giving a very tough and flexible coating, and even faster drying times are possible with a short bake. It has the following outstanding properties:

- Class H temperature rating.
- Fast drying.
- Good penetration.
- Good bond strength.
- Solderable.
- Excellent heat, acid and alkali resistance.
- U.L. Recognized Varnish.

Synthite AC-43 is also available in spray cans.

**Recommended uses**

SYNTHITE AC-43 is suitable for use on the following equipments:

Stators Windings	Coils	Transformers
Printed Circuit Boards	Resistors	Capacitors

**CHARACTERISTICS**

**Physical properties**

Color	clear
Specific gravity at 25°C	880±50 gr./lt.
Viscosity, Ford Cup n.4 at 25°C	20-26"
Viscosity, ISO Cup n. 3 at 25°C	50-70"
Viscosity, Demmler Cup n.1 at 30°C	15-20"
Build Up, D.F.T. ASTM D-115	mm. 0,060/0,070
Thinner	Dolph's T-200
Air drying time - Set to touch	10 min.
Air drying time - Tack free	1 hour
Corrosive Effects on Copper	none

**Electrical properties**

Dielectric Strength , Dry	2000 Volts/mm. 0,025
Dielectric Strength , after 24h. dipping into water	1200 Volts/mm. 0,025
CTI according to IEC 60112	600 M

**Chemical resistance**

Water	Excellent
Acid (10% Sulfuric Acid)	Excellent
Alkali (1% Sodium Hydroxide)	Excellent
Salt Water	Excellent
Mineral oil, ASTM D-115-55	Passed



## APPLICATION

SYNTHITE AC-43 may be applied by dipping, brushing or spraying as supplied. It will air dry in 1 hour but can be baked to improve its chemical and oil resistance. A baking of 20-30 minutes at 150°C will provide a film with optimum toughness and bond strength.

For fast conveyor application, the following cycle is recommended:

1. Preheat units for 10 minutes at 110°C.
2. Dip into the varnish for 30 seconds.
3. Drain 10-20 minutes.
4. Bake 60-90 minutes at 110°C.

Synthite AC-43 should be thinned 10-15% for this type of cycle.

N.B. The pre-heating, even if recommended, is not absolutely necessary.

## GENERAL PROPERTIES

### Compatibility with magnet wire coatings.

SYNTHITE AC-43 is compatible with the following magnet wire coatings:

Polyvinyl formal	Plain Enamel	Polyurethane-Polyamide
Polyamide	Polyurethane	Polyvinyl Formal-Polyamide
Polyester	Epoxy	Textile
Polyimide	Amide-Imide	Polyester Amide-Imide

### Heat life

SYNTHITE AC-43 has a heat life of 20.000 hours at 180°C as determined according to ASTM D-3251 (Twisted Pairs) using MW35 magnet wire.

### Thinner

Thin with DOLPH'S T-200.

### Impregnating ability

SYNTHITE AC-43 has a low viscosity and will give well impregnated units by all methods.

### Dip tank stability

SYNTHITE AC-43 has a good stability in the dipping tank. Being an air-drying varnish ( that cures through oxygen absorption ) it is recommended to keep the dipping tank covered. If the varnish is not used for more than 10-15 days it is recommended to cover it with a layer of Dolph's T 200 thinner without mixing. Afterwards, before using the varnish again, mix the whole tank content.

Warning : all the information and application instructions concerning this product are based on technical specifications that we consider reliable, and are provided by way of example, according to our application experience. They do not establish any guarantee but only represent a starting point subject to alterations, according to the application and the kind of material to be treated. Before the product's use the user must determine the suitability for the intended use undertaking all risks and responsibility for whatever may happen in connection with the application. The producer and/or seller will not be considered responsible for any accident, loss or damage (immediate or consequent) originating from the use and/or the inability to use the concerned product. Albesiano Sisa Vernici srl reserves the right to change or modify at any time and without any notice the technical specifications of the product described in this data sheet.

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