Data sheet: # Synthite AC-43 /261-D

Designation **Synthite AC-43 / 261-D (175°C RED)**
(Air-drying liquid alkyd insulation)

DESCRIPTION

Synthite AC-43/261-D is an air-drying, reddish-transparent modified polyester varnish. resistant to high temperatures. It is designed for Class F applications and produces a film of excellent hardness and flexibility. It air-dries very quickly, and even shorter drying times can be achieved even shorter drying times. This varnish is also available in aerosol cans.

PROPERTIES

Synthite AC-43/261-D has the following excellent properties:

- Class F operating temperature.
- Fast drying.
- Good penetration. - Good bonding strength.
- Can be welded. - Excellent resistance to heat, acids and alkalis.

CHARACTERISTICS

Physical properties	
Color	transparent reddish
Specific gravity @ 25oC	880±50 gr./L.
Viscosity, ISO Cup 4 @ 25oC	50-70 seconds
Viscosity, Ford Cup 4 @ 25°C	20-26 seconds
Build, DFT (double layer) (ASTM D-115)	0,060-0,070mm
Solvent	Dolph's T-200
Drying time on copper plate - dust-free	10 min.
Drying time on copper plate - to the touch	1 hours
Life time	36 months
Corrosive effect on copper	None
Dry extract (3 h. at 105°C)	35,5% ±2

Electrical properties	
Electric strength, (dry / 0.025 mm film Thickness) ASTM D-115	2000 Volts/mm
Electric strength, 24 hours in water/ 0.025 mm film thickness (ASTM D-115)	1200 Volts/mm

Chemical resistance (ISO 2812 method 2, 168-hour exposure and on dried film thicknesses of 40 µm. Drying: 24h @ RT + 24h @ 60°C),				
	Blistering	**Rusting**	**Cracking**	**Test method**
Salt water	no	no	no	ISO 4628/2-3-4
Water	no	no	no	ISO 4628/2-3-4
10 % sulfuric acid	no	no	no	ISO 4628/2-3-4
1 % NaOH dilution	no	no	no	ISO 4628/2-3-4
IEC 60296 transformer oil IEC 60296, ASTM D 115-55			Test OK	ASTM D 115-55
Corrosion resistance (salt fog)		hours	200	ISO 9227

APPLICATION

Typical applications for Synthite AC-43/261-D are:

- **Stator windings**
- **printed circuit boards**
- **form wound coils**
- **resistors**
- **transformers**
- **capacitors**

HEAT RESISTANCE

SYNTHITE AC-43/261-D has a heat resistance of 20,000 hours at 175°C, calculated according to ASTM D-3251 (spiral yarns) using polyester yarn n. 18.

PROCESSING.

Synthite AC 43/261-D can be applied with a dip, brush or spray gun. It air-dry in one hour, but can be steamed to improve resistance to chemicals and oils. and oils.
Baking for 20-30 minutes at 150°C produces a film with excellent hardness and good binding properties.
For application with conveyor ovens, we recommend the following cycle:

1. **Preheat unit for 10 minutes at 110°C.**
2. **Soak in varnish for 30 seconds.**
3. **Drain for 10-20 minutes.**
4. **Anneal for 60-90 minutes at 110°C.**

For this cycle, AC 43/261-D should be diluted with 10-15% Dolph's T 200 thinner.
N.B.: Preheating is recommended, but not absolutely essential.

PENETRATION CAPACITY

SYNTHITE AC 43/261-D has a low viscosity which ensures good impregnation whatever the application method.

STABILITY IN THE IMPREGNATION TANK

SYNTHITE AC 43/261-D varnish lasts 36 months at a temperature of 30°C max. It offers good stability in the impregnation tank. Being an air-drying product (it hardens through absorption of oxygen), we recommend keeping the impregnation tank covered. If the varnish is not to be used in the vat for 10-15 days, we recommend covering it with a light coat of T-200 thinner without mixing. By then, before use, mix the entire contents of the vat.

COMPATIBILITY WITH WIRE COATINGS

Synthite AC-43/261-D varnish is compatible with the following enamelled wires:

Polyvinyl formal	Polyurethane	Amide-Imide
Polyamide	Epoxy	Glass-coated yarn
Polymer	Polyester	Polyurethane-Polyamide
Polyvinyl Formal-Polyamide	Polyester-Amide Imide	

PRECAUTIONS FOR USE

The use of SYNTHITE AC 43/261-D does not require any special precautions. Simply the observance of occupational hygiene standards. Work in ventilated areas, avoid contact with skin. In skin contact, wash with neutral soap and water. In case of eye contact, wash immediately with water and seek medical advice.