



FORMVAR

Proven performance in oil-filled applications.
Excellent hydrolytic stability.

Rea Material Code: **F**

Rea Insulation Code: **02**

Insulation Material
Description: **Polyvinyl Formal**

Thermal Class: **105**

Shape: **Round**

Conductor: **Aluminum**

NEMA Specification: **MW 15-A**

IEC Specification:
60317-14

MARKETS

Transformers:
General
Utility Distribution
Transformers

TYPICAL APPLICATIONS

Oil-filled transformers, superconducting coils for cryogenic applications, and motors

FEATURES AND BENEFITS

- Resistant to mechanical and winding abuse due to superior flexibility and abrasion resistance
- Performs well in in-line flattening processes.
- Compatible with most varnishes and impregnation compounds.
- Retains insulating properties when exposed to cryogenic temperatures.
- Compatible with transformer oils.

AVAILABILITY

Single	
	8-20 AWG
Heavy	
	1-20 AWG

TYPICAL PROPERTIES

This data is typical of 18 AWG copper, heavy build insulation only. It is not intended to be used to create specification limits.

THERMAL

Thermal Endurance		
		>110°C
Thermoplastic Flow	minimum	typical
	180°C	230°C
Heat Shock (20% 3X)		
		20% 3x 175°C
Stress Relief Temperature		
		150°C

MECHANICAL

Mandrel Flexibility	minimum	typical
After Elongation	20% 3x OK	30% 1x OK
After Snap	3x OK	1x OK
Elongation	32%	40%
Unilateral Scrape	minimum	typical
Avg. of 3 sides	1150 gms	1600 gms

ELECTRICAL

Dielectric Breakdown	
@RT	10 kV
@ 105° C	7 kV
High Voltage Continuity	
NEMA @ 1500 V DC	5 faults/100 ft max
Typical @ 2000 DC	0-1 faults/100 ft

CHEMICAL

Completeness of Cure	
	5 min boil 70/30
Transfer Oil System	
	Retained Flexibility- 1x OK

Retained Flexibility-
90% of original
breakdown voltage

Resistance to Solvents

After 24 hrs @ RT	Xylene
	50/50
	Cellosolve/Xylene
	Perchloroethylene
	1% NaOH
	28% Sulfuric Acid
	Gasohol