



## NYSOL

Solderable without prior insulation removal.  
Polyamide (Nylon\*) overcoat provides excellent mechanical protection during winding and insertion.

Rea Material Code: **NS**

Rea Insulation Code: **16**

Insulation Material Description:  
**Polyurethane overcoated with Polyamide (Nylon)**

Thermal Class: **155**

Shape: **Round**

Conductor: **Copper**

NEMA Specification: **MW 80-C**

IEC Specification:  
**60317-21**

UL Number: **E37683**

### MARKETS

Motors/Generators:

**General  
Residential**

Transformers:

**Specialty Transformers**

### TYPICAL APPLICATIONS

Coils (particularly random wound), universal motors, relays, lighting ballast transformers, fractional HP motors, torroidalcoils, and ignition coils

### FEATURES AND BENEFITS

- Excellent dereeling and windability on high speed and/or automated winding machines.
- Produces compact coils and windings.
- Self-fluxing providing excellent soldered connections with solder temperatures as low as 360°C.
- Exceptional film flexibility and adhesion resisting winding damage.
- Extremely resistant to a variety of solvents including most varnishes and hardener catalysts.

### AVAILABILITY

Single

7-32 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

>160°C

##### Thermoplastic Flow

minimum

typical

200°C

255°C

##### Heat Shock (20% 3X)

20% 3x @ 175°C

##### Stress Relief Temperature

130°C

#### MECHANICAL

##### Mandrel Flexibility

minimum

typical

After Elongation

20% 3x  
OK

30% 1x  
OK

After Snap

3x OK

1x OK

##### Unilateral Scrape

minimum

typical

Avg. of 3 sides

1150  
gms

1500  
gms

#### ELECTRICAL

##### Dielectric Breakdown

@RT

10 kV

@ 155° C

6 kV

##### High Voltage Continuity

NEMA @ 1500 V DC

5 faults/100 ft max

Typical @ 2000 DC

0-1 faults/100 ft

#### CHEMICAL

##### Resistance to Solvents

After 24 hrs @ RT

Xylene  
50/50

Cellosolve/Xylene

Perchloroethylene

1% NaOH

28% Sulfuric Acid

Freon TMS

Heavy

7-32 AWG