

DESCRIPTION**PRODUCT COVERED :**

Component - Systems components, electrical insulation.

Class 200 (N) insulation system designated N82

GENERAL CHARACTER :

The insulation system covered by this Report for use in transformer, motor, or coil constructions.

RATINGS :

System Designation	Insulation Class	Maximum Temperature, °C	Indoor	Outdoor (Enclosed)	Maximum Voltage
N82	200 (N)	200° C hot spot	Yes	Yes	600

CONSTRUCTION DETAILS :

<u>Insulation Function</u>	<u>Insulating Material</u>
1. Magnet Wire	Aluminum or copper, round or rectangular or sheet.
2. Magnet Wire Insulation	R/C Magnet wire (OBMW2) single build or greater Magnet wire types listed below may be used in combination within a single product. A) Polyester basecoat with a polyamide-imide topcoat, rated 200°C or ANSI MW35 type, various manufacturers B) Polyester-amide-imide basecoat only, rated 200°C or ANSI MW74 type, various manufacturers
3. Ground and Interwinding Insulation	A) Nomex 410, 414, 418, 424, or 425, 0.005 in minimum thickness; Nomex 411, 0.0115 in. minimum thickness, Nomex E56A, 0.0075 in. minimum thickness; Nomex 992, 0.010 in. minimum thickness; or Nomex 993 or 994, 0.00825 in. minimum thickness, Du Pont. B) Rynite 530, FR530 , 0.02 in . minimum thickness, Du Pont. C) Kaladex 2000, 0.001 in minimum thickness, Du Pont. D). Recognized Component - Insulating Tape (QMFZ2), Tapes made from Polyethylene naphthalate, 1 mil Minimum thickness, tapes Manufactured by P. Leo & Co., one layers minimum: 1. 1PEN2, 2. 1PEN3, 3. 1PN2R, 4. 1PN3R
4. Minor Sheet Insulation (Layer, Outerwrap, Etc.) (Optional)	(A) Any sheet insulation or tape described in this table with no minimum thickness requirement. (B) The following materials by P. Leo 1. NTN*** Nomex/Polyester/Nomex 2. TK-*** Coil Paper/Polyester 3. TP-**** PB-2/Polyester 4. N/PEN/N-*** Nomex/Pen/Nomex 5. DPD-*** Polyester Mat/ Pen/ Polyester Mat 6. RP65 Mica Sheet 7. N/M-*** Nomex/Polyester 8. D/M/D-*** Polyester Mat/ Mylar / Polyester Mat 9. N/M/N-*** Nomex / Mylar / Nomex 10. SR853T Polyester/Mica 11. SR315T Pen/Mica 12. SM61 Mica Sheet 13. D/M** Polyester Mat / Polyester

6. Tape (Optional)

A. The following tapes manufactured by P. Leo.

- | | |
|----------------|----------------|
| 1. No. 1A025 | 19. No. 1P130 |
| 2. No. 1C821 | 20. No. 1P350 |
| 3. No. 1G006 | 21. No. 1P700 |
| 4. No. 1G015 | 22. No. 1P701 |
| 5. No. 1G027 | 23. No. 1P702 |
| 6. No. 1G130 | 24. No. 1P717 |
| 7. No. 1G830 | 25. No. 1P800 |
| 8. No. 1H850 | 26. No. 1P801 |
| 9. No. 1H860 | 27. No. 1P802 |
| 10. No. 1H86A | 28. No. 1P808 |
| 11. No. 1H861 | 29. No. 1P830 |
| 12. No. 1H862 | 30. No. 1P833 |
| 13. No. 1H863 | 31. No. 1P9FR |
| 14. No. 1K063 | 32. No. 1PK825 |
| 15. No. 1K7177 | 33. No. 1PN820 |
| 16. No. 1M868 | 34. No. 1PN828 |
| 17. No. 1N008 | 35. No. 1PEN2 |
| 18. No. 1N012 | 36. No. 1PN2R |
| | 37. No. 1N155 |

**5. Core Tube or Bobbin
(Mechanical Support Only)
(Optional)**

The following materials manufactured by Chang Chun :

1. Grade T373J
2. Grade T375J
3. PBT-4130

8. Spacers and Wedges (Optional)

(A) Any material described in this table regardless of thickness

(B) The following materials by Glastic :

- | | |
|-----------|---------|
| 1. SG-200 | 2. FHT |
| 3. UTS | 4. TSF |
| 5. MTS | 6. 1580 |
| 7. 1583 | |

9. Sleeving

A. Teflon Tube 2T-TFL, 2T-TFT by P. Leo

11. Potting Compound (Optional)

- A. No.8705, Epoxylite
- B. No. 8822, Epoxylite

12. Varnish

R/C Varnishes (OBOR2), the following manufactured by Ripley Resin Engineering :

- A. No. 468-2 (+)
- B. No. 468-2-7 (+)
- C. No. 468-2FC (+)
- D. No. 468-2FX

(+) May be followed by a one to three alphanumeric suffix indicated percent of inert filler and/or color.