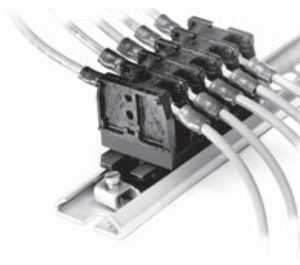


Note: All part numbers are RoHS Compliant.

ERT Series, Medium Duty Radiation Resistant

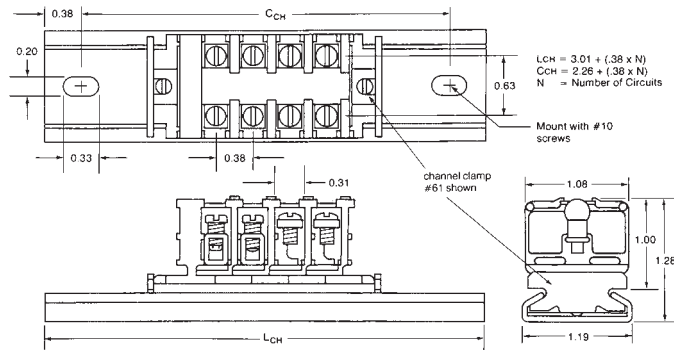


Physical Properties
Effect of Radiation on Physical Properties

The effects of radiation (neutron and gamma particles) on RYTON R-4 material have been studied. Since RYTON, as an engineering plastic, may fill applications in nuclear installations these effects are important. The test results show no effects on physical properties by these relatively high exposures to gamma and neutron radiation. There is no indication from these data of crosslinking or degradation of the RYTON R-4 material.

Note: Determination of the suitability of the ERT Series Blocks for particular applications rests solely with customers.

DOVETAIL BASE MOUNTED ON STANDARD #60 CHANNEL



| Description | Catalog Number | Part Number |
|---------------|----------------|-------------|
| Strap Screw | 0721ERT | 1437394-9 |
| Tubular Clamp | 0725ERT | 1-1437394-6 |
| Tubular Screw | 0724ERT | 1-1437394-1 |
| End Section | 0730ERT | 2-1437394-0 |

| Housing: RYTON (Polyphenylene Sulfide) | | ASTM Test |
|--|--------------------------------------|----------------------------|
| Density | 100 lbs./ft.3 | D1505-68 |
| Tensile Strength | 19,500 psi | D638-72 |
| Elongation | 1.3% | D638-72 |
| Flexural Modulus | 1,700,000 psi | D790-91 |
| Flexural Strength | 29,000 psi | D790-91 |
| Compressive Strength | 21,000 psi | D695-69 |
| Izod Impact Strength | | |
| Unnotched, 1/8" Specimen | 8.0 ft. lbs./in. | |
| Notched, 1/8" Specimen | 1.4 ft. lbs./in. | |
| Rockwell Hardness | R-123 | D785-65 |
| Water Absorption | 0.05% | D570-63 |
| Heat Distortion Temp. @ 264 psi | 500°F | D648-72 |
| Specific Heat, 24 hrs. @ 25°C | 0.25 btu/lb./°F | |
| Thermal Conductivity | 2.0 btu-in./h-ft.2 F | |
| Coefficient/Linear Thermal Exp. | 2.5 x 10-5 in./in./°F | |
| Flammability, UL 94 | V-0 | |
| Dielectric Strength | 350 volts/mil | D149-64 |
| Dielectric Constant, 25°C 1 kHz | 3.9 | D150-70 |
| 1MHz | 3.8 | |
| Dissipation Factor, 25°C 1kHz | 0.0010 | D150-70 |
| 1MHz | 0.0013 | |
| Conditions | | |
| Temperature | In Reactor Core: 35°C | In Water Pool: 30°C |
| Radiation | Mainly neutrons | Mainly gamma |
| Intensity | 1010 ergs g-1 (C) | 109 ergs g-1 (C) |
| Used Particle Detectors | Calorimeter and activation detectors | Ionization chamber |
| Radiation Dose | | |
| | Flexural Strength psi | Modulus of Elasticity, psi |
| 0 | 28,700 | 1,900,000 |
| A. Neutron | | |
| 5 x 10 rad | 29,000 | 1,910,000 |
| 1 x 10 rad | 28,900 | 1,880,000 |
| B. Gamma | | |
| 5 x 10 rad | 29,700 | 1,810,000 |
| 1 x 10 rad | 30,200 | 1,840,000 |
| 5 x 10 rad | 28,500 | 1,820,000 |

RYTON is a registered trademark of Chevron Phillips Chemical Company.

