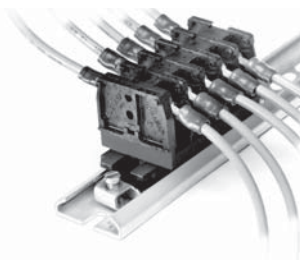


**Note:** All part numbers are RoHS Compliant.

**ERT Series, Medium Duty Radiation Resistant**

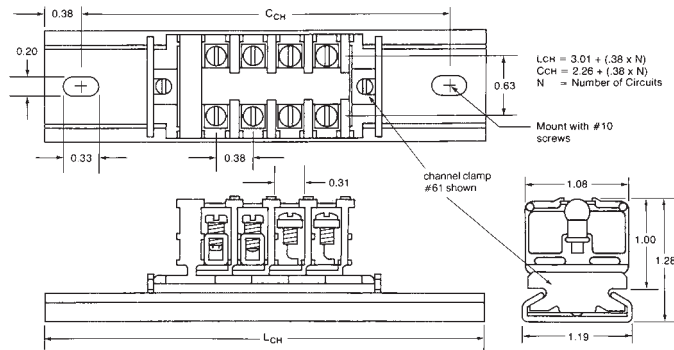


**Physical Properties**  
**Effect of Radiation on Physical Properties**

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	
<b>Conditions</b>		
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
<b>Radiation Dose</b>		
	Flexural Strength psi	Modulus of Elasticity, psi
0	28,700	1,900,000
<b>A. Neutron</b>		
5 x 10 rad	29,000	1,910,000
1 x 10 rad	28,900	1,880,000
<b>B. Gamma</b>		
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.

