

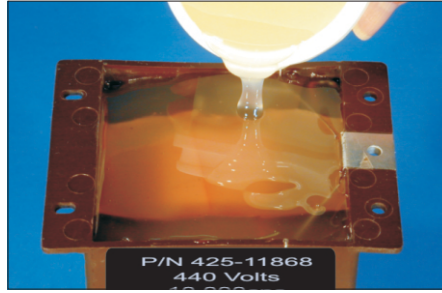
450°F Duralco™ 4538

Super Flexible Epoxy

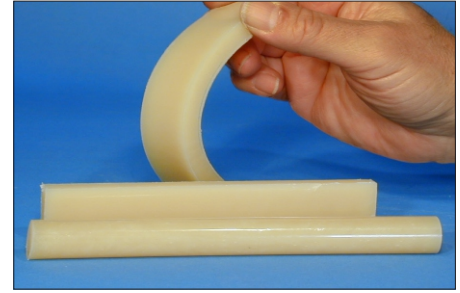
So Flexible It Can Be Tied Into A Knot



Epoxy So Flexible
You Can Tie it in a Knot



Potting a High Temp. Transformer for
Severe Thermal Cycling Resistance



Super Flexibility Ideal for Stress Free
Bonding and Potting

Duralco™ 4538

Now, unlike ever before, there is a solution for applications requiring the ultimate in thermal shock and vibration resistance, sound absorption and excellent adhesion to dissimilar substrates.

This completely variable system can be tailored to meet any application requirement just by varying the mix ratio of resin to hardener resulting in the exact degree of flexibility required for any application.

Easy to use. Just choose the mix ratio desired, dispense resin and hardener, mix to a uniform color and apply.

Duralco™ 4538 has excellent adhesion to most plastics, metals, ceramics, glass, rubber and even treated Teflon™ and cures at room temperature without any objectionable odors.

Can be used from -100°F to +450°F.

Duralco™ 4538 has outstanding chemical resistance, high bond and peel strength, thermal shock and mechanical resistance and will not soften or gum up at high temperatures.

Users Report Duralco™ 4538:

Bonds: Zytel™ 101, Victrex™, Poly-Phenylsulfone, Nylon, Poly-Carbonates, Phenolics and other difficult materials. Successfully bonded a Teflon™ housing to a ceramic bushing, and ceramic magnets to a plastics holder.

Thermal Shock Resistance: Withstands repeated thermal cycling from 100°F to + 300°F.

Seals: Bonded and sealed a 4 inch diameter glass sight port to a brass housing for use from -100°F to +300°F.

Encapsulates: Stress free potting of delicate electronic assemblies for severe thermal shock environments.

High Peel Strength: Adheres to Teflon™ (treated) and other hard to bond plastics.

Duralco™ 4538 is The Most Variable, High Temperature, Adhesive System Available and is The Ideal Choice for Applications Requiring Stress Free Bonding and Flexible Encapsulations.

Adjusting The Flexibility

1. Pick the degree of flexibility desired.
2. Select the resin to hardener ratio from the table.

Use formulation

B for most applications.

C or D for severe thermal shock, vibration bonding of dissimilar materials

A for applications where a more rigid is required.

| Formulation | A | B | C | D |
|------------------------|-------|----------|------|---------|
| Flexibility | Rigid | Flexible | Soft | Softest |
| Resin (by wt.) | 100 | 100 | 100 | 100 |
| Hardener (by wt.) | 80 | 120 | 200 | 300 |
| Physical Properties | A | B | C | D |
| Hardness (Shore A) | 100 | 60 | 40 | 30 |
| Tensile Strength (psi) | 8000 | 6000 | 2500 | 1200 |
| Elongation (%) | 4 | 8 | 20 | 80 |
| Tg °F | 53.8 | 48.2 | 41.4 | 32.9 |

| Duralco™ | 4538 |
|---|------------------|
| Max. Use Temperature | 450°F |
| Components (Color) | 2-Tan |
| Mixed Viscosity (cps) | 14,000 |
| Mixed Density (gm/cc) | 1.0 |
| Hardness Variable (Shore A) | 60-80 |
| Tensile Strength (psi) | 6,000 |
| Thermal Conductivity (BTU-in/Hr. Ft ² F) | 7 |
| Thermal Expansion (10 ⁻⁵ /°C) | N/A |
| Dielectric Strength (volts/mil.) | 450 |
| Volume Resistivity (ohm-cm) | 10 ¹⁴ |
| Elongation (%) | 8 |
| Thermal Stability (% 1000/hr @ 200°C) | 0.50 |
| Shrinkage (% max.) | 0.80 |
| Moisture Absorption (% 30 Days) | 0.50 |
| Mix Ratio (R/H) | 100:120 |
| Cure (Hr. @ R.T.) | 4 - 24 |
| @ 250°F (min.) | 60 |



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