

Technical Data Sheet

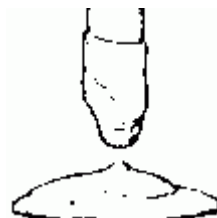
406 Colloidal Silica

406 Colloidal Silica is a thickening additive used to control the viscosity of the epoxy and prevent epoxy runoff in vertical and overhead joints. 406 is a very strong filler that creates a smooth mixture, ideal for general bonding and filleting. It is also our most versatile filler. Often used in combination with other fillers, it can be used to improve strength, abrasion resistance, and consistency of fairing compounds, resulting in a tougher, smoother surface.

Use 406 Colloidal Silica to thicken the epoxy mixture to the desired consistency. The thickness of a mixture required for a particular job is controlled by the amount of filler added. There is no strict formula or measuring involved—use your eye to judge what consistency will work best. The chart below gives you a general guide to the differences between neat (unthickened) epoxy and the three consistencies referred to in WEST SYSTEM manuals.

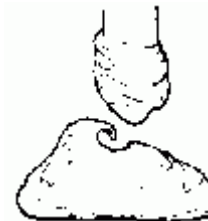


| Filler | Package size | Quantity of mixed epoxy required for | | |
|--------|--------------|--------------------------------------|------------------------|---------------------------|
| | | catsup consistency | mayonnaise consistency | peanut butter consistency |
| 406-2 | 1.7 oz | 1.3 qt | .9 qt | .5 qt |
| 406-7 | 6.0 oz | 1.1 gal | 3.0 qt | 1.7 qt |
| 406-B | 10.0 lb | 27.0 gal | 16.0 gal | 6.0 gal |



Catsup

Mayonnaise



Peanut butter

Typical Properties of Dry Filler

Bulk Density 3.0 lb/ft³ (50 g/L)
 Average Particle Size 0.2 to 0.3 microns

Typical Properties in Cured Epoxy:

(105/206/406, mixed at mayonnaise consistency.)

Shore D Hardness 80.
 Compression Strength 8,500 psi
 Density 65 lbs/ft³

Filler Selection Guide

| USES Resin/Hardener mixture thickened with a Filler Use description—desired characteristics | ADHESIVE FILLERS | | | | FAIRING FILLERS | |
|---|---------------------------------------|-------------------------|--------------------|------------------------|-------------------------------------|-------------------|
| | Highest density Highest strength ← | | | | Lowest density → Easiest sanding | |
| | 404 High-density | 406 Colloidal Silica | 403 Microfibers | 405 Filleting Blend | 407 Low-density | 410 Microlight |
| Bonding Hardware —Increased fastener interface and hardware load capability—maximum strength | ★★★★★ | ★★★★ | ★★★ | ★★ | | |
| General Bonding —Join parts with epoxy thickened to create a structural gap filler—strength/gap filling | ★★★ | ★★★ | ★★★ | ★★ | ★ | |
| Bonding with Fillets —Increase joint bonding area and create a structural brace between parts—smoothness/strength | ★★ | ★★★★★ | ★★ | ★★★★ | ★★★★ | |
| Laminating —Bond layers of wood strips, veneers, planks, sheets and cores—gap filling/strength | ★★ | ★★★ | ★★★★★ | ★★ | ★★ | |
| Fairing —Fill low areas and voids with an easily shaped and sanded surface filler/fairing compound—sandability/gap filling | | | | | ★★★ | ★★★★★ |

Filler suitability for various uses ★★★★★=excellent, ★★★=very good, ★★=good, ★=fair, (no stars)=not recommended.