

PRODUCT PROFILE

DESCRIPTION

COMBAT NUMETAL is a versatile epoxy metal repair compound that is machinable yet has the strength needed to hold up to aggressive industrial applications. Combat NuMetal is a 100% solids, no VOC's epoxy mixture that has the ability to get your equipment back on line fast. Combat NuMetal can stop high pressure leaks in corrosive environments, eliminating the need for costly down time. Surface preparation is minimal. Combat NuMetal can be sanded, drilled into or cut allowing for reattachment of equipment and fitting. **Patch it and walk away from your problem.**

- 100% Solids, No VOCs
- Excellent UV stability
- Excellent impact resistance and corrosion protection

CHEMICAL RESISTANCE

- | | | |
|---------------------------------|-------------------------|---------------------------|
| • Acetic Acid up to 10% | • Isopropyl Alcohol | • Most Sulfides |
| • Ammonium Hydroxide* | • Mineral Acids | • Sulfuric Acid up to 80% |
| • Aromatic & Aliphatic Solvents | • Nitric Acid up to 45% | • 1,1,1-Trichloromethane |
| • Black Liquor | • Mild Organic Acids | • Urea Solutions |
| • Butyl Acetate | • Most Phosphates | • White Liquor |
| • Butyl Carbitol | • Phosphoric Acid | |
| • Most Chlorides | • Potassium Hydroxide* | *Ambient temperature only |
| • Hydrogen Sulfide | • Sodium Hydroxide* | |

PREPARATION SP5 FINISH

Recommended: Metal surfaces must be prepared by thoroughly cleaning and roughening to gain maximum adhesion. Sweat oily chemical soaked items and then grit blast a very rough 2-4 mil profile into the surface. (NACE 1 / SSPC-SP-5)

PHYSICAL PROPERTIES

Color	Dark Gray
Coverage per gallon (Theoretical)	12.8 sq. ft. @ 1/8" thickness
Mix Ratio by Volume/Weight	3:1/5:1 (Resin:Hardener)
Flash Point	> 250°F (121°C)
Pull-Off Adhesion Test ASTM D 4541	Minimum adhesion is 2850 psi
Coefficient of Thermal Expansion (10-6/per °F)	1.1
Thermal Stability	
(weight loss after 48 hours @ 300°F)	0.0003 grams
Specific Gravity	Resin: 2.12 Hardener: 1.59
Volatile Organic Compounds (VOC)	0 grams/liter
Weight per gallon	13.37 lbs

POT LIFE

40°F (4°C)	1 hour 20 minutes
75°F (24°C)	50 minutes
92°F (33°C)	30 minutes

Note: Do not keep the blended coating in the original container unless immediate use is planned. Otherwise, exotherm—heat created during the curing process—will considerably shorten the pot life. Pour the coating into a rolling tray or large aluminum-basting pan. Try to keep the depth of the coating in the tray below 3/8".



**SERVICE
TEMPERATURE**

Dry Service	490°F (255°C)
Spill/Splash	293°F (145°C)
Immersion Service*	194°F (90°C)

** Immersion with solvents, mineral acids, or alkalines, or if over 150°F, contact factory.*

**CURE TIME
(AT 70°F OR 21°C)**

Re-coat Window	1/2 to 2 hours
Light Loading	12 hours
Immersion (Aqueous) Service	48 hours
Full or Chemical Service	120 days

**TOP-COATING & JOINING
ADJACENT SECTIONS**

If the compound is to be coated, apply the coating within the re-coat window (see table above). If this is not possible, allow the compound to cure, then brush-blast, wire-brush or sand to create a mechanical profile on the surface before coating.

When it is necessary to join multiple sections of the compound to create a continuous protective layer over a large area, do not attempt to feather and overlap adjoining sections. If adjoining sections cannot be applied within the re-coat window (see table above), continue the full thickness of the compound up to the joint between sections. Allow the first section to cure, then create a mechanical profile, using one of the means listed above, on the edge that will be joined to the next section to ensure a satisfactory bond.