PRODUCT BULLETIN

TCC-412
SURFACE CASTING SYSTEM

ABRASION RESISTANT
HIGH IMPACT

TOOL CHEMICAL COMPOSITES

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DESCRIPTION

Epoxy Resin **TCC-412** is an aluminum filled surface casting system designed for high impact and abrasion resistance on prototype stamping dies. This system can be surface cast to metal or other low cost cores. Depending on thickness of cast, a choice of hardeners is provided to control exothermic heat and shrinkage. Other applications include cast surfaces on drop hammer dies, small foundry patterns, hammerforms and faces on punches and dies with cast iron or other metallic cores.

HANDLING CHARACTERISTICS AND PHYSICAL PROPERTIES @°25C/77°F

Mix Ratio (parts by weight).....Resin TCC-412/Hardener TCC-104, TCC-104-5.....100R/10H

	TCC-412/104	TCC-412/104-5
Thickness of Cast	½”	½” - 4”
Pot Life (500 gram mass)	1 hour	2 hours
Peak Exotherm	190°F	110°F
Linear Shrinkage	0.0015 in/in	0.0015 in/in
Mixed Specific Gravity	1.65	1.67
Mixed Viscosity	5,000 cps	5,300 cps
Cured Color	Aluminum	Aluminum
Peak Operating Temperature	180°F	210°F
Coefficient of Thermal Expansion	4.9×10^{-5} in/in/°F	4.7×10^{-5} in/in/°F
Hardness	88 Shore D	88 Shore D
Compressive Strength	37,000 psi	39,000 psi
Tensile Strength	9,850 psi	10,400 psi
Flexural Strength	13,000 psi	14,500 psi
Machineability	Poor	Poor
Cure Time	12 - 24 hours	12 - 24 hours
Shelf Life (in original unopened containers)	TCC-412/TCC-104 or TCC-104-5	2 years

SANITARY PRECAUTIONS

Do not take internally. Avoid prolonged breathing of vapors. Work in a well-ventilated area. Avoid skin contact. Protective gloves should be worn. If contact occurs: wash skin with soap and water. Avoid eye contact. If contact occurs: rinse well with water for 15 minutes, contact physician.

STORAGE

Store at room temperature. Before use, mix resin well with mechanical device.

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