



**TCC-401
EPOXY MASS CASTING
SYSTEM
IRON FILLED
ROOM TEMPERATURE**

PRODUCT BULLETIN



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DESCRIPTION

Epoxy Resin **TCC-401** is an iron oxide filled mass casting resin designed as the back up material for casting applications such as plastic draw dies for forming metal parts. Size of the casting is limitless and shrink and exotherm are controlled by utilizing fillers and the proper hardener. By utilizing this system, prototype and short-run production of parts can be accomplished rapidly with minimum cost.

TYPICAL HANDLING CHARACTERISTICS @ 77°F (25°C) AND HARDENER SELECTION

Thickness of Cast	up to 1"	1" to 4"	4" to 10+"
Hardener Selection	TCC-104	TCC-104-5	TCC-105
Mix Ratio (parts by weight):			
.....Resin TCC-401	100 parts	100 parts.....	100 parts
.....Hardener	10 parts	10 parts.....	10 parts
Pot Life (500 gram mass)	30 minutes	50 minutes	1 - 2 hours
Cure Time.....	8 - 12 hours	12 - 24 hours	24 - 48 hours

TYPICAL PHYSICAL PROPERTIES @ 77°F (25°C)

Density	120 lb/ft ³
Specific Gravity	1.9 g/cc
Mixed Viscosity.....	5,500 cps
Cured Color	Black
Peak Operating Temperature	180°F
Hardness.....	80 Shore D
Compressive Strength.....	28,500 psi (197MPa)
Compressive Modulus:	
.....TCC-401/105	282,000psi (1,944MPa)
.....TCC-401/105 with 1 part Aluminum.....	315,000psi (2,172MPa)
Notched Izod Impact Strength.....	1.9 ft lbs/in
Tensile Strength.....	7,000psi/48MPa
Shelf Life (in original unopened containers)	TCC-401/TCC-104, TCC-104-5, or TCC-105 2 years

Note: Large castings can be achieved by using aggregate fillers such as aluminum cut wire, stone or metal shavings. The filler is added at a ratio of 2 to 4 parts for each 1 part of resin mix. This ratio of filler reduces shrink and exotherm allowing extremely large castings.

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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