



**TCC-231  
POURABLE  
PATTERN PLANK®  
EPOXY  
CASTING SYSTEM**

**PRODUCT BULLETIN**



**www.CASSpolymers.com**  
**31200 Stephenson Hwy**

**800.344.7776**  
**Madison Heights MI 48071**

**TCC@CASSpolymers.com**  
**Ph 248.588.2270 Fax 248.588.5909**

**DESCRIPTION**

**TCC-231 Pourable Pattern Plank®** is a filled two-component modified epoxy system which exhibits similar characteristics as the PP-1052 Pattern Plank®. The material is a lightweight, tough, cost effective and pourable alternative to metal. The TCC-231 system exhibits high-impact abrasion resistant properties and its use will produce dimensionally stable tools. Applications include prototype and low-volume foundry patterns, core boxes, metal forming tools and checking and assembly fixtures. **This system has been improved to provide a more positive cure for different thickness of cast. Now to control exothermic heat and shrinkage TCC-231 Pourable Pattern Plank® comes with a choice of four hardeners. The hardeners are TCC-231-1 Fast, TCC-231-2 Medium, TCC-231-3 Slow and TCC-231-4 Slower. The thickness of cast will determine the hardener choice.**

**HANDLING CHARACTERISTICS @ 25°C/77°F**

Mixed Viscosity .....	18,000-27,000 cps
Mixed Density .....	1.08 grams/cc
.....	9 lbs/gal
Color .....	Resin TCC-231 .....
.....	Red
.....	Hardeners TCC-231-1, TCC-231-2, TCC-231-3, TCC-231-4.....
.....	Amber
.....	Cured Color.....
.....	Red
*Cure .....	7 - 10 days
Alternate Cure @ 150°F .....	6 hours
Machinability.....	Excellent
Shelf Life (in original unopened containers).....	TCC-231 System (Resin/Hardeners).....
.....	2 years

\*Within 24 hours material will reach 90% cure @ 77°F

**CAST UP TO ½"**

Mix Ratio (parts by weight).....	Resin TCC-231/Fast Hardener TCC-231-1 .....	100R/14H
Pot Life (200 gram mass).....		45 minutes
Hardness .....		80 - 82 Shore D
Demold Time .....		24 - 36 hours

**CAST UP TO 1"**

Mix Ratio (parts by weight).....	Resin TCC-231/Medium Hardener TCC-231-2 .....	100R/15H
Pot Life (200 gram mass).....		120 minutes
Hardness .....		80 - 82 Shore D
Demold Time .....		24 - 36 hours

**CAST 1" TO 3"**

Mix Ratio (parts by weight).....	TCC-231/Slow Hardener TCC-231-3.....	100R/16H
Pot Life (200 gram mass).....		240 minutes
Hardness .....		80 - 82 Shore D
Demold Time .....		24 - 36 hours

**CAST 3" TO 6"**

Mix Ratio (parts by weight).....	TCC-231/Slower Hardener TCC-231-4 .....	100R/16.3H
Pot Life (200 gram mass).....		312 minutes
Hardness .....		80 - 82 Shore D
Demold Time .....		24 - 36 hours

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**PHYSICAL PROPERTIES (Cast Bar TCC-231 Resin/TCC-231-2 Hardener)**

Flexural Strength.....	7,781 psi
Flexural Modulus.....	680,900 psi
Tensile Strength.....	4,498 psi
Tensile Elongation.....	0.64%
Heat Deflection Temperature @ 66 psi.....	62°C/144°F
Heat Deflection Temperature @ 264 psi.....	59°C/138°F
Machinability.....	Excellent
Stability.....	Excellent

**STORAGE AND HANDLING**

Store at room temperature. Before use mix resin well with mechanical device. Lacquer based sealers or primers are not recommended for this product. An acrylic based paint such as Krylon is preferred.

TCC-231 Tech/Revised 7/21/09  
Supercedes 8/20/07

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