



Technical Data Sheet

Casting Resins

Casting Resins are specifically formulated as 2-component 100% solids polyurea-based materials designed to produce dimensionally stable high temperature, high impact, chemical resistant parts. Resins are available in both hard or flexible versions and provide a dent-scratch resilient class A part surface. Flexible Casting Resin may be pour cast, RIM injected molded or cartridge gun spray dispensed. Cured materials are extremely tough and exhibit excellent durability against abrasion and cleaning chemicals. Casting Resins deliver a 1-15 minute reaction time to provide enhanced part manufacturing cycle times. Depending on the hard or semi-flexible neat formulation the material shrinkage will range from .007-.010 in./lin. in. Fillers may be added to reduce shrinkage and to provide other desired physical properties. Pigments are normally added to provide uniform appearance. Material functional operation temperature ranges from -40°F to 180°F.

Physical Properties

Casting Resin 60 A – Flexible Physical Properties

Color/Clarity	Visual	Amber/Opaque
Flex Modulus	ASTM D790	20k psi (241.3 Mpa)
Tensile Strength	ASTM D412	1200 psi (13.8 Mpa)
Elongation	ASTM D412	450%
Hardness -Shore A	ASTM D785	60 A
Abrasion -TaberCS17	ASTM D4060	50 mg/1k cycles
Tear Strength	ASTM D624	200 lbs/lin in. (5357 kg/m)
Gel Time	Time	6 min

Mix Ratio	PBV	1:1
-----------	-----	-----

Casting Resin 70 D – Hard Physical Properties

Color/Clarity	Visual	Amber/Opaque
Flex Modulus	ASTM D790	>350k psi (2413.16 Mpa)
Tensile Strength	ASTM D412	5000 psi (34.47 Mpa)
Hardness -Shore D	ASTM D785	70 D
Abrasion -TaberCS17	ASTM D4060	50 mg/1k cycles
Tear Strength	ASTM D624	350 lbs/ lin.in (6250 kg/m)
Gel Time	Time	15 min

Mix Ratio	PBV	1:1
-----------	-----	-----

Casting Resin 75 A – Flexible Physical Properties

Color/Clarity	Visual	Amber/Opaque
Flex Modulus	ASTM D790	35k psi (241.3 Mpa)
Tensile Strength	ASTM D412	2000 psi (13.8 Mpa)
Elongation	ASTM D412	400%
Hardness -Shore A	ASTM D785	75 A
Abrasion -TaberCS17	ASTM D4060	50 mg/1k cycles
Tear Strength	ASTM D624	300 lbs/lin in. (5357 kg/m)
Gel Time	Time	15 min
Mix Ratio	PBV	1:2

Mixing Instructions

Casting Resins may be mixed and dispensed using a plural component pumping machine for pour casting or RIM injection. They may also be dispensed using low pressure pneumatic cartridge guns with static mixer tubes or hand batch mixed in bucket using jiffy mixer. When hand mixing, stir slowly and carefully as to not induce air into resin mixture. Cured material produces a smooth glossy surface. To obtain a Class A mold surface, mold surfaces must be polished smooth. Casting Resins must be mixed thoroughly before using. It is very important not to induce air bubbles while mixing as to avoid air entrapment. For closed mold RIM part manufacture, always provide adequate air-bleed tunnels or vents throughout mold perimeter. For pour casting of parts, small entrapped surface air bubbles may be relieved by quickly waving over the liquid surface with a propane torch. Please call email our Technical Support Group for any questions regarding material, application or direction of use.