

SILPAK QUICKCAST A/B

Unfilled, 100% Solid Castable Urethane Plastic System

Quickcast A/B is an odorless, low viscosity and low shrink plastic with good impact resistance – non brittle. Its quick demolding cycle lends itself well for a variety of casting applications, especially for rotocasted parts and as a low-cost choice for production parts. Once cured, it can be machined, sanded and drilled. Material can either be hand or meter mixed. Filters can be added to adjust cost, appearance and function – *See Filler Product Tech Sheet for more information.*

Features

- Good impact resistance
- Low viscosity
- Quick demolding cycle
- Odorless

Applications

Any application where durable plastic parts are needed.

- Model kits
- Art reproductions
- Stage props
- Prototype pieces
- Production parts
- Roto-casting

Physical Properties (Typical Values)

Reactivity Data

Property	Test Method	Results
Solids by weight (%)		100
Shrinkage	(100%) GAP25	Unfilled: 0.01 / Filled: 0.001
Viscosity @ 74°F	ASTM D-2196	50 A / 100 B
Specific Gravity	ASTM D-1638	1.22 ± .04 Part A, 1.01 ± .04 Part B
Gel time @ 75°F		180 seconds
Demold time		15-30 minutes
Mix Ratio by weight		50 A / 50 B
Mix Ratio by Volume		47% ISO (20 gram/cu/in) / 53% POLY (16.2 gram/cu/in)

**Reactivity times are influenced by many variables, including size of pour, part's shape, ambient temperature and humidity.*

Cured Material

Property	Test Method	Results
Color		White
Hardness, Shore D		70
Compressive Strength	D-695	7990
Tensile Strength	D-638	2390



Mixing

Parts A and B should be at room temperature – above 75°F – prior to use. Use appropriate plastic mixing containers and spatulas (tongue depressors and paint sticks are acceptable) that are clean and moisture free. ***Part B should be shaken or properly stirred prior to use.*** Weigh or measure appropriate amounts of A and B in container. Combine components and immediately mix, thoroughly scraping sides and bottom for 20-30 seconds before pouring into silicone mold. ***If mold is non silicone, use an appropriate release agent – ER 2300.*** If using filler, ensure that filler is moisture free and premix into Part A using a high shear mix head – airless **Jiffy Mixer Blade**. ***Off ratio can cause oily surfaces, which will limit paint adhesion.**

Curing

Do not disturb the mold until part is ready to be demolded. Prematurely demolding parts may cause deformation, especially in thin areas. Preheating molds to 100°F prior to casting will expedite cure, especially for thin section parts. Low temperatures will slow curing time and extend demold time. ***Curing and Gel times are influenced by many variables, including size of mix, part shape, filler content, ambient temperature and age of material.**

Finishing

Unfinished castings are subject to discoloration, yellowing, and chalking when exposed to direct or indirect sunlight and should be painted, coated, or sealed. Oil based paints work well. Using an oil based primer will improve paint adhesion. If release was used, wash the surface with grease dissolving soap or mineral spirits before painting. It is best to perform any finishing when parts are fully cured – 24 to 72 hours @ 75°F.

Storage and Shelf Life

A and B components must be stored in their original, unopened containers at temperatures between 75°F and 85°F. Shelf life of materials when kept in unopened sealed containers, at the recommended storage conditions, is 6 months. Containers should not be opened until ready for use. Once opened, storage life can be extended with the use of a purging gas – Nitrogen.

Accessories

Colorants

CU Pigment

All pigments should be added to the “B” side only at 1-2% of total weight of resin mix. Castable urethanes are affected by direct and indirect sunlight and should be painted with oil-based paint to protect color and surface.

- Red
- Yellow
- Fleshtone
- Black
- White
- Blue
- Brown

Colorants (continued)

Bright Shade Powder

- Green
- Orange
- Yellow
- Pink
- Red

UD Dye

Transparent coloring used in Clear and Transparent Urethane and Epoxy.

- Red
- Yellow
- Black
- Blue

Fillers

Fillers may be incorporated into Urethane resin to change the weight, color, cost, texture and paintability. Several fillers are available to fit an application. Fillers should be handled and stored carefully – sealed – to avoid contamination from moisture. Always mix fillers into part A, which is lower in viscosity, then add proper amount of B when ready to cast a part. Metallic fillers should be mixed when ready to use because they can accelerate the cure drastically. **Recommended levels of additional filler are based on total Resin Weight – A+B.**

PE Mini Fibers

PE Mini Fibers are used to bulk up system for brush-on/troweled on processes for parts or mother molds. Pre-mix PE fibers into Part A at 5% or 10% by weight. When ready to use, add Part B at equal weight of Part A only, mix and quickly apply to mold or surface. Applying additional layers should be done immediately before material has fully cured. Cold weather below 65°F will cause slow cure.

	Description	Recommended Amounts
CC-200	Limestone to lower cost and add weight to material	50-200%
GAP-25	Aluminum mixture used for reducing shrinkage and increasing thermal conductivity for vacuum form tools	50-200%
GF-3000	Glass beads, aids in density and scratch resistance, reduces shrinkage for masters or patterns	100-200%
HGF-100	Hollow glass filler for lightweight parts	5-10%
Pro-Lite FR 50	Nonabrasive, light-weight filler	50%

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