

Product Name

FLEXICAST® 45

Flexible High-Strength Moulding Rubber 45A Polyurethane Elastomer

Product Description

Flexicast 45 is a two part polyurethane elastomer that cures at room temperature to a flexible, high strength mould rubber. Moulds made from Flexicast 45 are durable and require little to no release when casting plasters and waxes. When used with the appropriate release system, Flexicast 45 moulds are excellent for casting FMG, concrete, polyurethane, polyester and epoxy.

The final parts or moulds made from Flexicast 45 will be tough and long wearing, making them ideal for long term moulding requirements. Flexicast 45 can be processed without the aid of vacuum degassing, allowing for larger mould pours and a wider variety of mouldmaking conditions. Flexicast 45 will provide excellent chemical resistance to most casting systems while maintaining a high standard of physical properties.

Physical Properties

Hardness		Shore A	45
Specific Gravity, cured		g/cc	1.02
Colour		Visual	Yellow
Tensile Strength		psi [mPa s]	408 [2.81]
Tear Strength	Die C	pli [kN/m)	82 [14.36]
Elongation		%	1 135
Shrinkage, linear		in/in	Nil

Handling Properties

Mix Ratio	By Weight	Part A	100 pbw
		Part B **	100 pbw
Viscosity	cps @ 25°C	Mixed	2 000
Work Time	100g mass @ 25°C		30 minutes
Gel Time	100g mass @ 25°C		30-35 minutes
Demould Time	@ 25°C		16-24hrs (note 1)
Cure Schedule	7 days ambient; or demould followed with post cure of 6 hours @ 50°C is recommended to promote maximum physical properties. See Mix & Cure.		

Master Preparation:

- Porous masters made of timber or plaster may need to be sealed to prevent penetration of the rubber into the pores of the material/master.
- For most applications Stoner E236 or J-Wax will provide adequate release from a sealed or non-porous master.
- For multi-piece moulds, Flexicast will bond to cured Flexicast, ensure a suitable release such as E236 or J-Wax is applied to the cured Flexicast surface prior to pouring.

- Master sealed with Shellac must have sufficient release agent applied as Flexicast will readily bond to a shellac coat surface.
- When in doubt, a small sample pour is always recommended to test for complete curing and proper release.

Mix & Cure

- After correctly weighing Parts A and B, mix thoroughly whilst best avoiding trapping excess air into the rubber. Care must be taken to scrape the sides and base of the mix container to ensure a proper mix
- A common practice is to pour the mixed material into a second container and quickly mix again. This will ensure that no unmixed materials are poured.
- Pour the rubber as soon after mixing as possible for best flow and air release.
- To ensure a bubble free mould, deaerate the mixed Flexicast under vacuum.
- Avoid curing the material in temperatures below 15°C.
- Ultimate properties are achieved after 7 days at room temperature, however moulds can be used with care after curing for 48 hours.

Additives

- FLEXI-FIBRE can be added to the mixed material to thicken the liquid mix to a gel for application by brush or trowel. HDK-N20 can also be used.

Cured moulds

- When pouring plasters and molten waxes in Flexicast 45 release agent is generally not required, however an application of Pure Lube Mould Soap will help reduce air bubbles in plaster and aids release.
- E236 and J-Wax are the best choices for most resin casting systems.
- Water based release agents such as Flexi-Coat is preferred when casting concrete.
- Excess exposure to solvent containing releases should be kept to a minimum when required to reduce the chance of mould distortion due to swelling or shrinkage.
- Shrinkage and swelling may become apparent after repeated casting with resins having strong solvents or porous casting materials such as plaster and cement which can extract oils from the mould surface. Proper choice of mould release can help minimize this.

Storage

Opened containers of material should be purged with F720 Dry Air Blanket prior to replacing lids or caps, to prevent moisture contamination from humid air. Store at room temperature in a dry area.

Notes

Both components should be mixed before each use to ensure uniformity of the materials. Part B requires stirring or mixing to ensure settled materials are thoroughly combined prior to use.

Some Part B's may darken with age but cured rubber properties are not affected.

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1

Disclaimer

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