

DESCRIPTION

AC 2310 is a two component, low viscosity, surface casting system designed to provide a hard, wear resistant surface on all types of metal forming dies. Although formulated specifically for face casting or resurfacing Kirksite, AC 2310 can also be used to resurface and make design changes in all types of plastic tools that do not require high heat or chemical resistance such as those used for the resin transfer molding for polyester or vinyl ester resin systems. AC 2310 may be cast up to two inches thick when cast against thermally conductive surfaces. The geometry of the cast and the insulating quality of the master must always be considered in determining the maximum volume that may be poured.

APPLICATIONS

- Metal stretch forming tools
- Drop hammer dies
- Hydroforming dies
- RTM molds

PROPERTIES

- Longer tool life
- Lower cost
- Elimination of costly benchwork or cast metal tools
- Exceptional wear resistance
- Room temperature cure
- Faster design changes

PHYSICAL PROPERTIES

		AC 2310 Resin	AC 2310 Fast Hardener	AC 2310 Hardener
Composition		Epoxy	Amine	Amine
Mix ratio by weight		100	10	10
Aspect		Thixotropic Liquid	Liquid	Liquid
Color		Gray	Clear amber	Clear amber
Mixed viscosity at 77° F (25° C) (mPa.s)	ASTM D2393		10,000	10,000
Specific Gravity at 77° F (25° C)	ASTM D792		2.16	2.16
Pot life at 77° F (25° C) (440 g)	ASTM D2471		35 minutes	4 hours
Demold time* (hours)			16	24
Maximum Casting Thickness (Inches)			0.75	2

Depending on part thickness

PROCESSING

Carefully weigh out appropriate amounts of resin and hardener into a clean mixing container and thoroughly mix until all streaks are gone. Take extra care to scrape the sides and bottom frequently to insure complete mixing. Pour the mixed material in the thinnest stream possible onto a single spot of the mold cavity or in the sprue holes as desired. Allow the mixture to flow slowly over the mold surface or into the sprue hole to help eliminate air entrapment.

CAUTION: Unmixed compound from the sides or bottom of the container can cause soft spots or uncured areas in the completed casting. To prevent this, it is advisable to transfer the entire mixed contents to a second clean container and remix for a short time before using.

MECHANICAL and THERMAL PROPERTIES⁽¹⁾

Property	Method	Units	AC 2310
Volumetric weight		lbs/in ³ (g/cc)	0.078 (2.16)
Hardness	ASTM D2240	Shore D1	90 - 95
Tensile Strength	ASTM D638	psi (MPa)	5,000 (34)
Flexural Strength	ASTM D790	psi (MPa)	8,400 (58)
Flexural Modulus	ASTM D790	psi (MPa)	1.11 X 10 ⁻⁶ (7,700)
Compressive Strength	ASTM D695	psi (MPa)	11,600 (80)
Coefficient of Thermal Expansion	TMA	ppm/° F (° C)	19 (34)
Shrinkage	ASTM D256	%	0.5%
Tg	DMA	° F (° C)	160 (71)
Machinability			Poor

⁽¹⁾ The above properties were obtained under laboratory conditions using standardized specimens. Cured at room temperature.

STORAGE CONDITIONS

Shelf life is 12 months in a dry place and in original unopened containers at a temperature between 59 – 77° F (15 – 25° C). Any opened can must be tightly closed.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

- Ensure good ventilation
- Wear gloves, safety glasses and impervious clothes.

For further information, please consult the material safety data sheet.

GUARANTEE

The information contained in this technical data sheet result from research and tests conducted in our Laboratories under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON guarantee the conformity of their products with their specifications but cannot guarantee the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications