



REPRO[®] A/R

Description

An innovative liquid tooling urethane that is formulated with silicon carbide for increased wear resistance, this casting resin is designed specifically for extreme wear applications such as high production foundry patterns and core boxes. Be aware that this material is difficult to machine or alter once it is fully cured, making it our most wear resistant Repro product. Repro A/R is dark gray in color.

Please refer to the Repro User's Guide for detailed instructions on using our Repro products.

Physical Properties

Color (when mixed)	Dark Gray
Mix Ratio (by weight or volume)	1:1
Mixed Viscosity (cps)	1,800
Gel Time (min. @ 72°F.)	6-7
Hardness (Shore D)	83-85
Compressive Strength ^[1] (psi)	7,060
Flexural Strength ^[2] (psi)	4,680
Flexural Modulus ^[2] (psi)	468,000
Tensile Strength ^[3] (psi)	3,050
Tensile Modulus ^[3] (psi)	1,010,000
Izod Impact Strength ^[4] (ft-lbs./in.)	0.27
Specific Gravity	1.9
Linear Shrinkage ^[6] (in./in.*)	0.001
Vol. Wt. Ratio (cu. in./ lb.)	14.5
Deflection Temperature @ 66 psi ^[7] (°F)	136°F
Demold Time (minutes)	60-90

*-Actual shrinkage dependent upon mass

ASTM Tests: [1]-D695, [2]-D790, [3]-D638, [4]-D256, [5]-D696-98, [6]-D2566, [7]-D648

Ordering Information

Item Number	Description	Net Wt.
053171	Repro A/R Gallon Kit	20 lbs

Physical and mechanical properties of tooling plastics herein reported are typical after a full cure of seven (7) days at room temperature or equivalent. Designated mix ratios must be adhered to for desired results.

READ SAFETY DATA SHEETS AND PRODUCT LABELS BEFORE USING PRODUCT

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REPRO USER INFORMATION

The following information, except when specifically noted, is common to the entire Repro Castable Tooling Plastics Line. A separate instruction sheet is available for using Repro Surface Coat and Laminating Resin System.

Instructions For Use

Materials Needed

- Repro Castable Plastic A & B
- Plastic or Lined Paper Mixing Containers
- Mixer - Jiffy, Plunge Mixer, Hula Girl, Red Devil
- Release Agents - Freeman Wax Release, RP 76, PVA
- Plastic or Rubber Gloves
- Solvent - Acetone or Alcohol
- Clean Cloth
- At least three Mixing Paddles

Preparation

- If bonding Repro to a surface, clean and abrade the surface to be bonded.
- If Repro is to be parted from a surface that it is poured against, follow proper sealing and release procedures to prevent bonding.
- Procedures for parting Repro from metal, wood, plastic, wax, and plaster are available from **Customer Service 800-321-8511** or our website **www.freemansupply.com**.

Mixing and Pouring

- Plastic or rubber gloves **MUST** be worn when working with Repro (read Warning Information)
- Using an appropriate mixer, **THOROUGHLY** mix Parts A and B in their original containers. Use separate mixing heads if using a drill-driven mixer for Parts A and B. A single mixing head may be used but it essential to completely clean the mixing head with solvent before mixing the other component to avoid contamination.
- By weight or volume pour equal amounts of Part A and Part B into separate clean and dry containers. Replace the lids on both sides of the original Repro containers to prevent contamination.
- Pour the A side into the B side cup and mix well, approximately 30 seconds, using a tongue depressor or paint paddle. Be aware of the Gel Time for the particular Repro formulation that you are using to avoid the premature solidification of the material.
- When mixing is complete pour the liquid into a third container and mix briefly to ensure a complete mix of Parts A and B.
- Pour the mixed Repro into your mold cavity. To help avoid air entrapment, hold the container well above the mold surface if possible, and pour in a thin stream.

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 2/03

Gel Times and Demolding

Product:	Gel Time (Min.):	Demold Time (Min):
Repro Fast	4-5	15-30
Repro 10	5-6	30-60
Repro 83	6-7	60-90
Repro One	6-7	60-90
Repro NS - Non Settling	6-7	60-90
Repro 95 - Aluminum Filled	6-7	60-90
Repro A/R - Abrasion Resistant	6-7	60-90
Repro Light	6-8	90-120
Repro Ultra Light	10-11	120-180
Repro Slow	12-14	180-240

**Note: Demold times are greatly affected by poured mass and ambient temp.*

FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN

A-Side contains POLYOL

B-Side contains ISOCYANATE

WARNING

Direct contact may cause eye or skin irritation. Exposure to vapor or liquid might cause respiratory and skin sensitization, as well as eye irritation.

Avoid contact with eyes, skin, and clothing. **DO NOT TAKE INTERNALLY.** Avoid breathing of vapors. Use only with adequate ventilation. Wash thoroughly after handling. **FIRST AID** - If inhaled, move person(s) to fresh air. If contact with eyes or skin, flush immediately with cold water for at least 15 minutes and get medical attention. Wash skin with soap and water. If swallowed seek medical attention immediately.

IN CASE OF FIRE: Extinguish fire with dry chemicals, carbon dioxide, Halon 1211, or foam.

Moisture Sensitivity

IMPORTANT - Because all urethanes are hygroscopic (sensitive to moisture) the user must keep Repro container lids closed when not in use. Repeated opening and closing of the container may introduce moisture into the Repro material and negatively affect performance of the product. We recommend that a quick spray (1-2 seconds) of Magic Blanket be sprayed into the opened A and B container before resealing the unused material.

IMPORTANT NOTICE TO PURCHASER

Manufacturer/seller shall NOT be liable for any injury, loss, damage arising directly, consequentially from the proper/improper use of product, but shall be obligated to replace quantity of product proved defective for intended application. User shall determine suitability of the product for intended use and assumes all risk and liability whatsoever in connection therewith. The foregoing may not be altered except by express written consent by an officer of manufacturer/seller.