Textured Repairs: Tips

BACKGROUND: The topic of creating synthetic textures for book and paper conservation from readily available art supplies was prompted by experimentation and necessity by conservators Grace Owen-Weiss (New York Public Library) and Sarah Reidell (University of Pennsylvania Libraries). They shared their techniques with the conservation community in a presentation to the Library Collections Conservation Discussion Group (LCCDG) at the Book and Paper Group (BPG) session of the AIC annual meeting in Milwaukee, WI in 2010. See:

> Owen, G. and S. Reidell. 2011. Cast Composites: A System for Texturing Repair Materials in Book Conservation. *Topics in Photographic Preservation* (14): 250-262. [PDF] https://sarahreidell.files.wordpress.com/2012/05/cast-composites2010article_fordistribution.pdf
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> Owen, G. and S. Reidell. 2010. Cast Composites: A System for Texturing Repair Materials in Book Conservation (handout). BPG Session, AIC Annual Meeting, Milwuakee, WI. [PDF] https://sarahreidell.files.wordpress.com/2012/05/handout_owensreidell_lccdg2010-12.pdf

DESCRIPTION: Cast films of acrylic media on various substrates like paper or textile replicate the patterns of original surfaces like leather or cloth grain, increasing the visual compatibility of mends and allowing for treatments more sympathetic to the original object. Materials already widely used in conservation are integrated with surface casting techniques common in objects and paintings conservation. They are easy to create from affordable supplies that are readily available at art supply stores. Treatment uses for cast composites are still in the experimental stages but have been successful as a repair material for bound volumes, textiles, objects, and art on paper. Completed cast composites are less invasive, thinner, and visually more compatible than traditional repairs with leather or Japanese papers.

SILICONE MOLDS: Many varieties of silicone mold kits exist but the **preferred kit** for this technique is the ***Smooth-On Rebound 25*** (orange, platinum cured) instead of, for example, *Oomoo 30* (purple, tin cured). Different kits may have similar preparation steps but different characteristics when cured. The *Rebound 25* has a significantly greater elongation at break (stretch) to aid clean-up and rolling away from the finished cast film. The higher tear strength of the *Rebound 25* will also allow for longer, more durable use.

Product	Color	A:B Mix ratio	Demold Time	Elongation at Break	Mixed Viscosity	Pot Life	Shore A Hardness	Tear Strength	Weight: In^3/Lb
Rebound 25 *(preferred)*	light orange	1:1 by volume	6 hours	690%	Brushable	20 min	25	102 pli	23.5
Oomoo 30	light purple	1:1 by volume	6 hours	250%	4250 cps	30 min	30	40 pli	20.6

GENERAL TIPS & OBSERVATIONS

- Liquid silicone mold material may stain surfaces, as a precaution take a mold only from surrogate materials rather than the original object.
- Prepare surface of fibrous surrogate materials like paper or textiles with a water-thinned application of Lascaux 498HV or Jade 403 PVA to fill the voids between fibers and aid capture of very fine details.
- Only use a clean, dry, and lint-free mold. Dust and lint will become embedded in the dried film. Clean used molds in warm water, resting to swell the acrylic and stretching the mold to encourage removal of stubborn acrylic films or with a soft sponge. Avoid scrubbing or picking at the surface texture.
- Place and pull an even layer of the acrylic media mixture across the mold surface with a spatula, large fan brush, scrap of mat board, or plastic palette knife. Avoid using tools that will scratch or mar the surface.
- If adding a support layer, drop and ensure contact with the acrylic media by gently brushing the verso with a broad, dry brush or the back of your hand. If necessary, minimally spray or humidify the support (particularly paper) before or after dropping to ensure full contact. Avoid completely wetting the support material since excess water will ruin the film formation. Extend the support material (paper) over the mold edges to aid removal and clean-up.
- The sheen of the dried acrylic film is impacted by the texture of the mold. Create a reference set of the Heavy Gel media (gloss, semi-gloss, matte) for each textured mold. Alter the final surface after use in treatment with local application of water-thinned gel media to match desired surface characteristics.