PRODUCT BULLETIN

GUIDE TO WORKING WITH MASTER WORKS™ M1

This information was generated using laboratory prepared specimens and is not intended for specification purposes. Please contact PUMA Polymers to obtain specification information.

1 PRE PRODUCT USE ROUTINES

Mix both components separately before using to ensure the product is fully homogeneous. This is best achieved by the use of a high shear-mixing blade in an electric drill or post mixer.

Before use, assess set time by doing a trail mix of Master Works™ M1 at 2:1 by volume, or 1: .45 by weight part A to Part B.

2 MIXING

When mixing Components A and B with high shear do not mix beyond the recommended mixing time (up to 1 minute) or create a vortex, as this will entrap air.

When using a high shear mixer the mixing speed should be lower than 750rpm. Over heating the product through excess shear during mixing could damage the polymer and influence the product's durability.

Remember the 2:1 mix ratio is by volume not weight.

If you mix by weight the ratio of A to B must be 100 parts of A to 45 parts B. This is due to the different densities of the two components.

If the ratio of A is too high this will slow the set of the product alternatively if the ratio of B is too high the product will set faster than standard.

- Ensure mixing vessels are clean and dry before using.
- If batch mixing the M1 ensure you mix only the product you can use in 12-15 minutes if the product is not retarded.

If you require to make a large laminate or casting the product should be retarded using Master Works™ Retarder following the Control Additives "Guide to Use".

Remember that the retarder will slow both the set and strength development and therefore you should allow longer time before demoulding.

3 PRODUCT CARE – SKIN FORMATION PREVENTION

Buckets containing M1 should always be kept sealed when not in use to prevent the product from skinning. If containers need to be left open during the working day, the product surface should be covered with a thin plastic film.

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Open containers should not be left in direct sunlight, as this will accelerate skin formation. If work needs to be undertaken in direct sun the product should be covered.

When a partly full container needs to be closed, ensure that the product residue on the sidewalls of the container is scraped down into the bulk material to prevent skinning of the thin film of material on the container walls.

Please note that if the product skins the skin cannot be reincorporated into the product by remixing. To remove the skin the product should be passed through a sieve with a nominal 1mm mesh.

4 GOOD WORKING PRACTICES

Brushes:
Brushes used for gelcoating should be completely dry. Wet brushes will cause the gelcoat appearance to be uneven with visible streak marks.

Fillers:
It is good practice to do a quality check before using any filler material with M1 to determine the impact on set time and the filler loading capability.

Do not use fillers with a high salt content, as these will retard the set time of the product. A set time check should be done on all fillers to check their influence on set time. This should also be done from one batch of the same filler to another to cover any batch-to-batch variances of the filler material. Master Works™ Accelerator can be used to compensate the retarding affect of some fillers.

For further information on the use of fillers, see Guide to Use – Incorporation of Fillers into Master Works™ M1.

Air release:
To aid air release when casting, up to 1% of water can be added to the mixed product. For further information, see Guide to Use – Master Works™ Control Additives.

Contamination:
Do not use Master Works™ M1 in the same area where polyester or polyurethanes are being sprayed as air borne contaminants can cause interlaminar failure of M1 between gelcoat and backing laminate.

Storage:
Store Master Works™ M1 containers out of direct sunlight and sealed to prevent product skinning. Do not allow Master Works™ to freeze.

Postproduction curing:
If faster strength development is required, manufactured components can be placed in an oven at temperatures between 30 - 40° C to assist in driving off excess water.

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