Mould Rubber Latex Datasheet

November 2017

A synthetic latex rubber for detailed reproduction of objects of virtually any fine texture.

Technical Data

Physical state	Liquid, ready for use
Appearance	Opaque when wet and amber when dry
% Solid content	N/A
Density	1.075kg/lt
Solubility	Soluble in water
Substrate temperature for moulding	Optimal at room temperature (20°C to 22°C) Should not exceed 50°C
Ambient temperature for moulding	Optimal at room temperature (20°C to 22°C) Should not exceed 50°C
Odour	Typical

Purpose

Ideal for replicating plaster, concrete or natural stone textures but can also be used for limited casting of small figurines/models (sock method) in Cemcrete's Glass Fibre Reinforced Cement, Plaster of Paris or concrete etc. As an opaque brush-on liquid, after multiple applications it builds up to a mould thickness of 1 to 3mm that air vulcanizes to a light amber colour. This forms a very tough, blanket mould with great elasticity. **Mould Rubber Latex** has a better tear strength than all synthetic rubbers and is preferred by the concrete and plaster shop industry when used as a sock mould or one that peels off a textured surface when requiring a negative mould. **Mould Rubber Latex** can be mixed with fillers and fibres to thicken and strengthen.

Limitations

Do not use when excessively hot as this may:

- Promote shrinkage
- Cause cracking
- Trap moisture in the film
- Lead to low tensile strength
- Cause delamination between layers
- Latex cannot be poured or applied in thick sections, it will not cure
- The number of coats can vary from 8 to 20 or more depending on the size and purpose of the mould

Benefits

- **Mould Rubber Latex** makes the thinnest, most elastic and strongest mould of any type of mould making rubber
- It can be pulled over relatively large undercuts when releasing the model without tearing
- The strongest moulds are made by brushing on thin layers of **Mould Rubber Latex**

Site Work

Storage

Shelf life about 6 months after date of invoice, but must be kept in a totally airtight container. Will thicken if volatiles are allowed to evaporate.

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Surface preparation

Ensure that surfaces are clean, dry and free of grease, oil or any form of laitance whatsoever. Except for Cemcrete's Glass Fibre Reinforced Cement models, surfaces may be washed in a solution of dishwashing liquid and water and dried before **Mould Rubber Latex** application.

Weather

Work in dry conditions, final set product is resistant to water.

Application

Sock moulds for small models/figurines

Example: A simple mould of a chess set figurines about 10 - 15cm high would normally take about 8 to 10 coats, each coat applied, then allow to dry in a warm area until the colour turns to amber before applying the next coat. About an hour or two between coats, depending on temperatures would be normal. To speed things up you can use a hair dryer to dry the water in the **Mould Rubber Latex** or one can advance the drying times between coats using a solution of calcium chloride and water mix that can be mist sprayed over the **Mould Rubber Latex** in between coats. The colour changes to an amber rubber colour when dry. Do not recommend **Mould Rubber Latex** for larger models/figurines where moulding materials are going to be heavy.

Mould Rubber Latex may be used to make moulds from masters (originals) made from various materials such as Cemcrete's Glass Fibre Reinforced Cement, clay, glass and concrete. Ensure the masters are clean, dry and free of grease or oil. Except for Cemcrete's Glass Fibre Reinforced Cement masters may be washed in a solution of dishwashing liquid and water and dried before **Mould Rubber Latex** application. Fasten the master to a firm non-porous substrate so that the entire piece can be moved without handling the coated areas. The latex compound may be used as an adhesive by pouring a small quantity onto the support, positioning the model and allowing the assembly to dry. Fibre brushes used to apply moulding latex should be rinsed in a solution of soap and water both before and after use. This aids cleaning of the applicators and prolongs their use. When applying brush **Mould Rubber Latex**, care must be taken to eliminate all air bubbles in the first coat. This will ensure that the detail is accurately reproduced. If a thinner viscosity is required for the first coat, it may be diluted with a small amount of distilled water. Brush from the top of the model to the bottom and continue out from the base to a distance of approximately 40mm on the supporting substrate. Apply the overlap for every coat of **Mould Rubber Latex**, not just the first. When dry the excess film provides a useful handle in casting operations.

The first coat should be dried at room temperature (20°C to 22°C) in order to minimise lifting from the master. Once the first coat is completely dry to touch subsequent coats may be applied. Drying between coats may be carried out at room temperature. Directing a current of air across the surface of the model at room temperature will speed the drying.

Note:
When casting your replica items using Plaster of Paris or Cemcrete's Glass Fibre Reinforced Cement is probably the easiest and can be painted later.

Printing mats or flat images where negative shapes/textures are required

Fibre brushes used to apply **Mould Rubber Latex** should be rinsed in a solution of soap and water both before and after use. This aids cleaning of the applicators and prolongs their use.

For models with a relatively large, flat surface area, the following application may be considered. When applying brush **Mould Rubber Latex**, care must be taken to eliminate all air bubbles in the first coat (un-thickened). This will ensure that the detail is accurately reproduced. When this is dry follow with a layer in a checkerboard pattern. Once the checkerboard application dries follow with an entire coating.

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To advance the drying times between coats a solution of calcium chloride and water can be mist sprayed over the **Mould Rubber Latex** in between coats. The colour changes as it dries. Continue alternating between the full coat and the checkerboard coat until desired thickness is achieved. This technique helps to reduce the tendency to shrink and keeps the dimensions of the finished mould very close to those of the original. Reinforcement of the latex may be achieved by mixing with Cemcrete's "Mould Rubber Thickener" and/or loose polypropylene fibre until thick enough not to sag and run, after the first three coats have been applied. Apply more coats until the desired dry film thickness has been achieved. Once the final coat of **Mould Rubber Latex** is applied the mould should dry for 24 to 72 hours at room temperature to cure. Temperatures should not exceed 50°C for moulding purposes. When the final coat is properly dry (deep amber colour) then the mould can be lifted.

Mixing

Mix with Cemcrete's "Mould Rubber Thickener" and/or loose Polypropylene fibre until thick enough not to sag and run.

Reinforcing

CemForce, a polypropylene woven mat can be cut to shape and set into "wet thickened" **Mould Rubber Latex** which will remarkably strengthen the final moulding. If the mould will need stretching off the object being moulded, do not reinforce in this manner. Therefore ideal for flat mouldings only.

Curing

Allow to thoroughly dry before carefully pealing of substrate and dust with dry Cemcrete's Mould Rubber Thickener before use.

Use and care of moulds

We would always recommend to let the latex to cure properly for a day before using the mould for the first time, then wash it thoroughly in warm water with a mild detergent using a soft sponge or cloth and allow it to drain and dry thoroughly. When not in use, make sure the mould is completely clean and dry and is stored in a cool, dry situation, out of direct sunlight - and not positioned or poised at any angle that might cause distortion. Give the mould a light dusting of Cemcrete's Mould Rubber Thickener inside and out if you are unlikely to use it again for a while.

Safety

Avoid skin and eye contact. Do not ingest. Wear safety glasses, gloves and protective clothing when necessary Keep away from children and pets. Keep sealed and isolate from other chemicals. In the event of contact with skin or eyes, rinse thoroughly with clean water. In the event of skin irritation or discomfort seek medical attention. See the relevant MSDS.

Packaging

Mould Rubber Latex	1 litre & 5 litre tins
Mould Rubber Thickener	1kg bag
Polypropylene Fibre 6mm	1kg bag
CemForce	1m widths, any length

Manufacturer's Warranty

Cemcrete warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to Cemcrete shall be limited to replacement of the product ex-factory. Cemcrete makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.