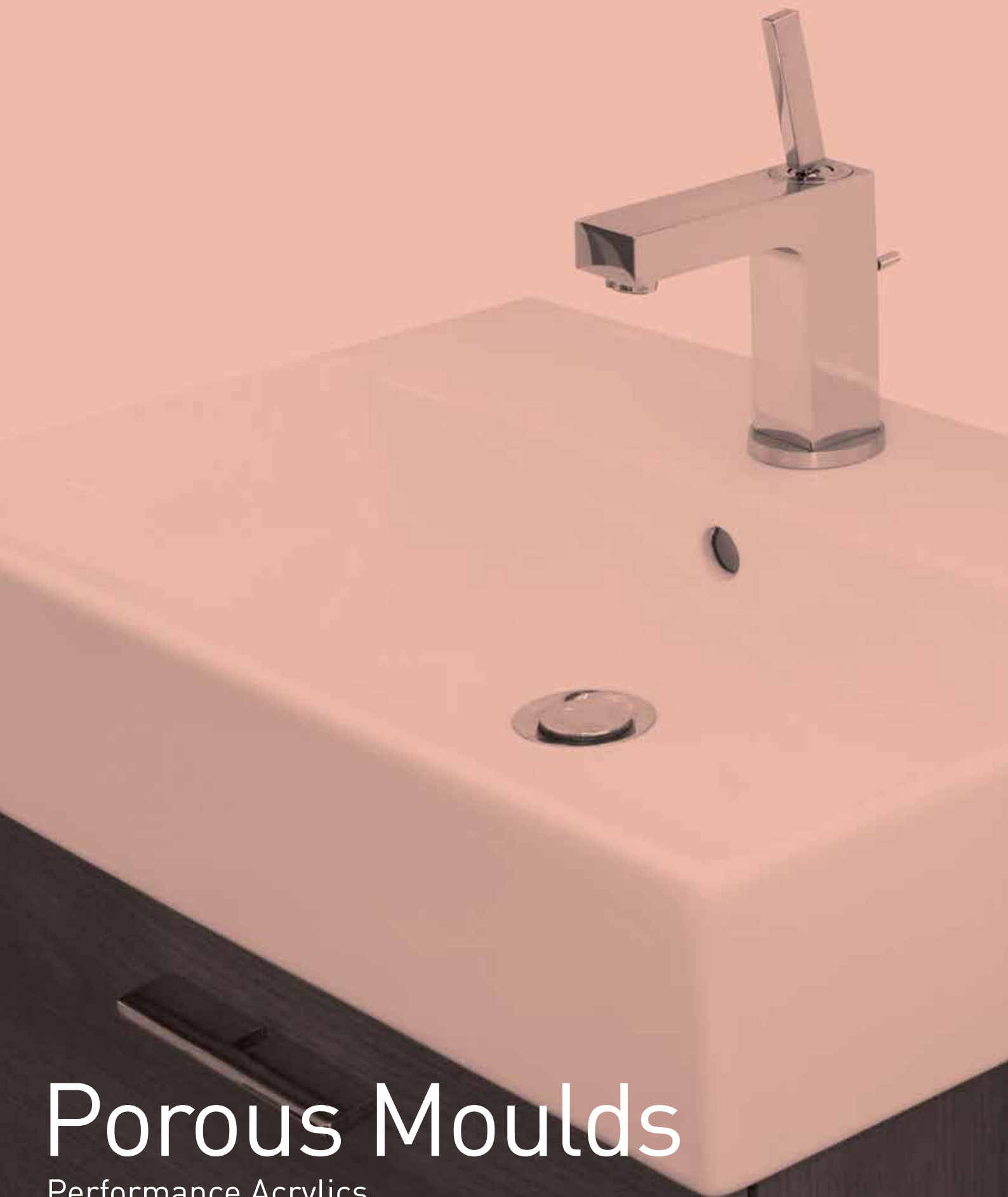


Lucite International

**Specialty**

**Polymers  
& Resins**



**Porous Moulds**

Performance Acrylics

# Colacryl® Elvacite®

## Porous Moulds

### › Brands with a strong heritage and proven track record

Lucite International has been supplying high quality, cost effective bead polymers to the world's sanitary ware producers and mould makers for more than twenty years. Our brands Colacryl® and Elvacite® stand for quality, reliability, and service. Several key factors contribute to our continuing success:

- High quality products: we produce only specialty polymers and concentrate on tightly controlling all the important characteristics of our resins such as particle size, reactivity and molecular weight.
- A broad range of products: we offer the most comprehensive range of acrylic products for mould production, which has been developed by working with major producers over many years.
- Reliable supply from an integrated production process: we produce acrylic polymer in all three major economic regions of the world, Europe, Africa and the Middle East, the Americas and Asia Pacific, which means that we can offer security of supply.
- Flexible approach: our experienced in-house technical team has built strong, direct relationships with the industry. This has enabled us to develop a wide range of bespoke products that provide reliable, value-adding solutions that can be further tailored to the specific needs of our customers.

### › What does a pressure casting mould polymer do?

Our acrylic-based polymers allow producers to make higher quality moulds that have significantly longer life than traditional plaster moulds; they also enable more economic production in facilities that require a smaller footprint and reduced headcount. These factors are of particular interest for manufacturers when drawing comparisons with traditional techniques. For example,

each plaster mould can only be used once per day and must dry fully before re-use. This either requires lengthy time to dry naturally, or a large amount of energy for force drying (each mould can use 2.3MJ of drying energy during its lifetime of 100 cycles).

### › How can Colacryl® and Elvacite® help develop better moulds?

We can provide advice on variations of compressive strength, fatigue strength and permeability of moulds, which helps users to design moulds with the optimum properties for their own designs and their associated slip rheology and composition. This help in basic design often translates to reduced unit manufacturing cost and moulds with a longer life.

### › Why choose acrylic?

Acrylic (commonly known as PMMA) is a proven, cost effective way of producing pressure casting moulds. A PMMA mould has significant benefits over traditional plaster moulds as follows:

- Cycle times are reduced
- No mould surface deterioration
- Mould life expectancy 20-50,000 impressions
- Huge energy saving (10x less energy than bench casting)
- Less space requirements
- Lower labour costs

### To achieve high efficiency and long life moulds must be strong and have controlled porosity

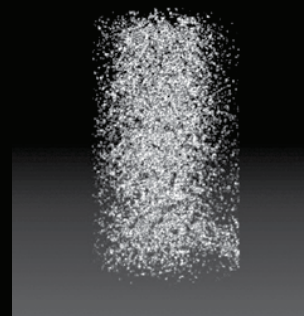
1

The external matrix is strong because of PMMA's balance of particle size and molecular weight properties.



2

The regular distribution of pores in the matrix ensures good permeability and controllable flow rates.



Images above provided by: University of Manchester, Materials Science Centre.



### ➤ Our porous mould grades

We offer a wide range of acrylic polymers that are recognised world wide for their ability to perform effectively and efficiently. Our range covers all commercially important types and has been created using our extensive experience to provide the best choice and quality to our customers. We are also happy to work in partnership with our customers to develop bespoke products to match specific requirements.

### ➤ Packaging

Elvacite® Resins are sold in bags of 25kg and Colacryl® Specialty Polymers are sold in 50kg fibreboard kegs. Other pack types may be available on request.

**Image above:** Many of the world's most beautiful bathrooms feature sanitary ware pieces that are created using the highest quality porous moulds made from our Colacryl® and Elvacite® acrylic polymers.

Grade	Molecular Weight Mw(million)	Particle Size (µ)	Description
Colacryl® DP300	1.3	80-100	Base polymer
Colacryl® D150	0.7	40-52	Reinforcing polymer
Colacryl® TS2073	0.2	40-45	Extra fast mixing polymer
Colacryl® TS2082	0.4	90-110	Filler polymer
Elvacite® 3009	0.14	400-600	Filler polymer

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[www.luciteinternational.com/resins](http://www.luciteinternational.com/resins)

### Disclaimer

The information and recommendations in this publication are, to the best of our knowledge, reliable and correct at the date of publication. Users should make their own tests to determine the suitability of these products for their own particular purposes and use.

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