

Synopsis of POLYCAST - Casting Resins, Backfilling Materials and Auxiliaries

Surface Resins, Gel-Coat-Resins

- POLYCAST OH 15-1/CH** Heat-resistant aluminium filled gel-coat resin with excellent properties. Especially suitable for surface coating of PU-moulds, vacuum moulds and similar applications, heat resistant up to 120°C, easy to process.
- POLYCAST OH 6/CH** Highly abrasive-proof, ceramic filled gel-coat resin with excellent hard-wearing qualities. Especially suitable for foundry models, copy models, PU moulds and similar applications. Cannot be processed. Temperature resistance approx. 100°C.
- POLYCAST OH 4/SR** Universal gel-coat resin, ceramic filled, easy to process, can be stained or coloured with colour pastes, highly suited for making negatives, foundry models, mould plates, checking fixtures and copy models as well as master patterns. Heat resistant to approx. 90°C.
- POLYCAST OH 11/PUR 3** Highly abrasion-proof and relatively elevated temperature strength PU-based surface resin, suitable for core boxes, mould plates for Disamatic machines, copy models and similar application, high impact strength, heat resistant to 92°C.
- POLYCAST OH 11/ST** Highly abrasion-proof PU gel-coat surface resin with excellent slip, which can be used with POLYCAST 525 and MST Steel Granules 0.2-0.4 mm for sheet metal tools, heat resistant 92°C.



MST Hofmann GmbH

MST Hofmann GmbH
Sandstr. 5
63589 Linsengericht
Germany

Tel.: +49 (0) 60 51 - 7 34 43
Fax: +49 (0) 60 51 - 7 45 75
Email: info@mst-hofmann.com
Web: www.mst-hofmann.com

Casting Resins for Backfilling - Epoxy-Base

POLYCAST GH 800/BRT

Thick, castable, heat resistant 2-pack Epoxy Resin with high stability and little elongation. Very good for front casting, can be filled with MST Aluminium Granules 0.5-1.25 rd or 0.5-1.75 sp. Suitable for backfilling of all metal sprayed mould masks, heat resistant up to 80°C, can be cast without filling material up to 60 mm and with filling up to 200 mm thickness, especially suitable for PU-foam moulds, RIM-foam moulds and similar applications.

POLYCAST GH 800/TL

Extremely heat-resistant 2-pack Epoxy Resin which can be cast, unfilled up to 50 mm and with MST Aluminium Granule filling up to 100 mm thick. Thin-walled castings must be tempered at 50-60°C for 12-15 hours. Heat resistant up to 100°C, very suitable for sheetmetal moulds, heated foundry patterns, PU-foam moulds, Rim-foam moulds and similar applications.

POLYCAST EPU 210/TL

Unfilled 2-pack Epoxy Resin, very heat resistant, can be used as basic resin for MST Aluminium Powder 0-70 for castings of 60-80mm thickness, or as laminating resin for heat resistant laminates and as binding-resin for aluminium granules 0.5-1.75 sp and for quartz-sand or slate-filler. Heat resistant up to 120°C, tempering advisable.

POLYCAST EPT 2000/1

2-component pre-filled epoxy resin with an extremely high heat resistance (up to 250°C) for production of injection moulds for prototypes and small series up to 10.000 de-mouldings, highly filled with aluminium powder. Requires post-curing to achieve better properties.

MST Mould Repair Material

2-component, high heat-resistant epoxy resin, with very good adhesion for the repair of cracked moulds or for the repair of parting lines. Can be filled with up to 10% of MST Aluminium Powder 0-70.

The details of our products and instruments and of our plants and processes are based on extensive research work and operational experience. These data are supplied verbally and in writing to the best of our knowledge and belief. This, however, does not exempt the user from verifying his own responsibility involved in their application. This also applies - particular for shipments abroad - to the safeguarding of third-party protective rights and to the applications and methods of procedure not expressly specified by us in writing. Our liability is thus limited in all cases to compensation in the same extent and scope as provided for quality deficiencies. In addition, our Application and Technical Service is available, on demand, for further advice and co-operation in the solving of manufacturing and application problems.

Casting Resins for Backfilling - PU-Base

POLYCAST T 90

Temperature resistant, highly-reactive PU-fast-cast-resin, filled with aluminium powder, can be de-moulded after 1-2 hours, easy to cast and process, little shrinkage, no tempering necessary. Highly suitable for small, uncomplicated vacuum moulds or for models and negatives with a smooth surface, heat-resistant to 80-90°C.

POLYCAST 525/74

Highly abrasion-proof, ceramic filled 2-pack PU-casting-resin with high impact strength. With the addition of MST Steel Granules 0.2-0.4 and the use of POLYCAST OH11/St for the surface layer, very suitable for steel metal forming tools for the automobile and aircraft industries. Also suitable for foundry models and mould plates due to negligible adhesion of the mould sand. Heat-resistant to 75°C. This resin, highly filled with Aluminium Granules 0.5-2.0 rd, can be used successfully for all type of PU-moulds like seat-cushion moulds, head-rest moulds etc. In this case it is advisable to use a metal sprayed surface or a gel-coat, i.e. POLYCAST OH6/CH or POLYCAST OH15-1/CH for the top coat.

POLYCAST GM 951

2-component, PU-based flexible resin for duplication of moulds with undercuts. The Shore A hardness is 55. Those patterns can be used for reproduction of moulds. Metal spraying on top of this pattern is possible.

POLYCAST SG 130/PUR11

High-quality, nearly odourless 2-component unfilled PU-casting resin. Alternative fillers can be added to the mixed components. After curing (without tempering) the binding agent is very temperature-resistant and has a high strength value. The remaining properties are determined by the filling materials used (i.e. F-B = Filler workable; F-A = Filler abrasion-resistant)

Casting Resin for Backfilling - Acrylic-Base

POLYCAST AC 1500

High temperature resistant Acrylic resin, which can only be used together with fillers - usually Aluminium Powder 0-70 µm. This resin is particularly well-suited for vacuum- and foam-moulds on account of its high temperature resistance - 130-140°C. Together with Aluminium granules it is also very suitable for backfilling of metal masks. The resin-filler mixture cures within 30 minutes after adding the hardener powder. Good heat conductivity

Vacuum Casting Resins

POLYCAST AP 133

2-component PU-based resin with a very high temperature resistance.

POLYCAST AP 372

It is a 2-component PU-resin which, due to its ingredients, displays properties similar to ABS. Positive features of this material are good casting and minimal shrinkage. POLYCAST 372 can also be used in foaming machines.

POLYCAST AP 410

A distinguishing feature of this 2-component PU-resin is its very high temperature resistance. By curing a temperature of 150°C can be achieved, further curing at 150°C will give a resistance up to 190°C.

POLYCAST AP 419

This 2-component PU-resin distinguishes itself through its good casting quality, long pot life and high temperature resistance of between 140-170°C.

Fillers

Aluminium Powder 0-70 µm

High-grade, fine Aluminium Powder as filler for casting resins with increased heat conductivity. Easy to work with.

Aluminium Granules 0.5-1.25 rd

High-grade Aluminium, coarse, round grains, guaranteeing good filling and heat conductivity.

Aluminium Granules 0.5-2.00rd

High-grade Aluminium, coarse, round grains, for highest filling rate and best heat conductivity.

Aluminium granules 0.5-1.75 sp

Spattered Aluminium Grain, good for stamping material and as filler for resins with increased impact strength, suitable for microporic vacuum moulds.

Aluminium granules 3-6 mm

High-grade Aluminium Granules, especially suitable as filler for the special acrylic-mixture POLYCAST AC1500. A higher conductivity and a lower exothermic reaction in the curing time, resulting in a fast improvement in adhesion to metal mask and in thermal conductivity.

Release Agents and other Mould Making Accessories

MST Primer (1)	Paste-form parting wax to be used for pattern treatment, absolutely necessary in metal spraying as undercoat for MST Release Agent (2).
MST Release Agent (2)	Green, liquid, film forming, an excellent adhesive base for metal spraying. Can be applied with a spray pistol or with a paintbrush.
MST-Parting Spray (3)	Highly effective wax spray, excellent anti-sticking agent for epoxy and polyurethane, can be polished after short drying time.
MST Parting Wax (4)	Highly effective, liquid parting wax which can be applied with paintbrush or a cloth, can be polished after short drying time, similar properties as MST Parting Spray (3).
MST Silicone-Parting Spray (6)	Highly effective silicone spray, excellent anti-sticking agent for epoxy and polyurethane, not suitable for parts which should be lacquered afterwards.
MST Wax T2, solid	Very efficient wax paste for epoxy and polyurethane resins or foam systems. Can be polished to gloss finish.
MST Mould Sealer PU100	High-grade, liquid parting agent, excellent for sealing and pores in metal sprayed surfaces. Several layers should be applied to the new mould and should be baked at 80°C or more. In this way a much better parting is obtained in all PU-moulds.
MST Primer Lacquer (black)	Used together with the MST Arc Spray System M150 to improve the adhesion of the sprayed shell to the pattern. Can be used instead of MST Primer (1). The dry surface can be polished.
MST Plast	Reasonably priced, highly heat-resistant plasticine, suitable for building up parting lines and sealing casting frames. Especially good for metal spraying, stable up to 100°C.



MST Hofmann GmbH

MST Hofmann GmbH
Sandstr. 5
63589 Linsengericht
Germany

Tel.: +49 (0) 60 51 - 7 34 43
Fax: +49 (0) 60 51 - 7 45 75
Email: info@mst-hofmann.com
Web: www.mst-hofmann.com

MST Wax Sheets 130

These wax sheets can be used up to 130°C, very good adhesion and flexibility, work very well together with MST 137 alloy.

MST Wax Sheets 64

These sheets are limited to max. 64°C, reasonably priced, self-adhesive, only for use with MST Parting Lacquer and MST Release Agent (2).

MST Airo Putty

2-component polyester filler, very good surface, good adhesion to all usual model-building materials, very flexible and easy to process.

MST Light Weight Putty

2-component polyester filler, easy to grind, very flexible.

MST Tool Model Board

MST-Tool is a synthetic board material machinable and workable with normal hand tools. It has good edge strength and is very stable. Minimum generation of dust during machining. Models produced with model board maintain high accuracy due to low coefficient of thermal expansion and uniformity. Treated surfaces have a dense, uniform structure. For bonding of sheets use MST Tool Adhesive.

The details of our products and instruments and of our plants and processes are based on extensive research work and operational experience. These data are supplied verbally and in writing to the best of our knowledge and belief. This, however, does not exempt the user from verifying his own responsibility involved in their application. This also applies - particular for shipments abroad - to the safeguarding of third-party protective rights and to the applications and methods of procedure not expressly specified by us in writing. Our liability is thus limited in all cases to compensation in the same extent and scope as provided for quality deficiencies. In addition, our Application and Technical Service is available, on demand, for further advice and co-operation in the solving of manufacturing and application problems.