

Product Information

PLEXIGLAS® Molding Compound, Recommendations on Materials for Injection Molding

1. Injection molds

Standard grades of PLEXIGLAS® (6N to 8H) do not cause corrosion. Therefore, all common tool steels are suitable for the purpose. Since it is important that they can be polished with ease, one will normally choose a high-purity, vacuum-melted chromium steel.

To reduce the adhesion of PLEXIGLAS® hw55, we recommend material no. 1.2083.

Conventional steel qualities:

Matl. No.	Abbreviation	Cr Content [%]
1.2083	X40 Cr13	12.5–13.5
1.2379	X155CrVMo121	11–12
1.2343	X38CrMoV51	4.8–5.5
1.2344	X40CrMoV51	4.8–5.5
1.2767	X45NiCrMo4	1.2–1.5

Depending on the application and requirements, special coatings on mold inserts may prove advantageous.

Electroformed nickel molds are also used (e.g. for microstructures or reflector molds).

2. Injection molding machines (screws and cylinders)

PLEXIGLAS® molding compounds can be processed on all commercially available injection molding machines with general purpose screws and cylinders which are also suitable for other thermoplastics (e.g. PC, ABS, etc.).

Specific requirements (e.g. extreme cleanliness) may call for coated cylinders and chromium-plated screws (Cr layer thickness approx. 30 µ).

Conventional steel qualities:

Matl. No.	Abbreviation	Cr Content [%]
1.8519	31CrMoV9	2.5
1.8550	34CrAlNi7	0.4–0.65

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The Business Unit Performance Polymers of Evonik is a worldwide manufacturer of PMMA molding compounds sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian Continent and under the trademark ACRYLITE® in the Americas.

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