



Plaster-bound embedding compound for precision casting in accordance with the lost wax moulding principle

GILCAST AL offers:

- Advantageous processing consistency
- Smooth cast surfaces with ideal detail reproduction
- Easy mould removal
- Particularly suitable for processing light metal and non-ferrous metal alloys
- Ideal for vacuum casting systems
- Consistent quality
- Very suitable for the casting of big flasks

Characteristics

Mixing ratio:

Powder : water:	1kg : 0.28 – 0.30 l
= Mixing volume:	0.595 – 0.605 l
Density:	2.15 – 2.14 kg/l
Mixing time:	1 – 3 min
Processing time:	approx. 10 minutes
Curing time prior to lost wax process:	min 60 min, better 120 min
Heating rate:	60 – 100 °C/h
Preheating temperature:	min 400 °C to max 750 °C
Holding time at final temperature:	approx. 4 hours per cm layer thickness:
	approx. 1 hour longer

Processing

Sprinkle **GILCAST AL** into the prepared water, stir briefly and mix for 60 until 180 seconds using a vacuum stirrer if possible. The use of water with high degrees of hardness may extend the processing time a little. Warm water (30 – 35 °C) shortens the processing time.

Under slight vibration and, if possible, under vacuum, the prepared embedding compound is poured into the casting vessel with correctly prepared wax or plastic

patterns. One hour after starting the mixing procedure, the wax in the casting vessels can be completely dissipated (by evaporation with steam wait 2 hours) by heating to 180 °C with a corresponding waiting time at this temperature. The temperature in the preheating furnace is then slowly increased as specified above and the final temperature maintained corresponding to the size of the casting vessel.

Depending on the type of alloy, the casting can be removed mechanically after cooling to room temperature or by placing in water after the glow colour of the alloy has disappeared.

Caution:

This embedding compound contains quartz and cristobalite. Therefore avoid inhaling dust!

Storage / Shelf life

Minimum 12 months in well sealed, moisture-proof packing drums. Material that was stored at a temperature other than room temperature should be allowed to acclimatise for several hours at 20 – 23 °C prior to use.

Longer storage periods at temperatures in excess of 30 °C can impair the storage stability.

Packing

Paper bags with a liner 25 kg

This information is provided to the best of our knowledge and is based on comprehensive testing. We guarantee the quality of our products in accordance with specifications, however, we can accept no liability for the results of further processing that are generally outside our sphere of influence.



Burnout times for Gilcast AL

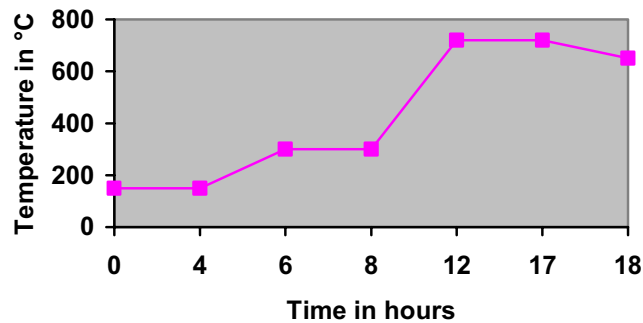
Examples of heating times for 18h

a) Placement in preheated furnace (150°C up to 180 °C)

4h	at 150°C (up to 180 °C)
2h	to 280°C
2h	at 280°C
4,5h	to 720°C
4h – 6h	at 720°C, max 750°C
1 - 2h	Cooling and holding at casting temperature

The actual time and temperature may vary according to flask size, type of furnace and furnace loading.

Burnout time



Burnout cycle for bigger flasks

b) Placement in preheated furnace (150°C up to 180 °C)

4h – 5h	at 150°C (up to 180°C)
2h	to 280°C
2h	at 280°C
1h	to 390°C
1h	at 390°C
4h	to 720°C
6h – 8h	at 720°C, max 750°C
1h to 2h	Cooling and holding at casting temperature

Burnout time

