

TEHCERAM VENEER REFRACTORY

USER INSTRUCTIONS

MIXING

It is recommended that **Techceram Veneer Refractory** powders are cooled and used at a temperature between ~ 5 - 15°C. Using powders in this temperature range will yield correct set time and set expansion.

Use 1 x 30g packet to 6 ml or 1 x 60g packet to 12ml expansile liquid. Put powder in dry mixing bowl, add liquid from a 0-10ml syringe*. Spatulate by hand until all powder is mixed in, this will form a creamy thick mixture. Mix under vacuum for 10 seconds. Pour into silicone dies under vibration, this will make the mixture flow freely. †

SETTING

Leave the refractory to set for at least 40-45 minutes to yield the correct expansion and hardness before removing models from silicone moulds.

DRYING/

1. Models burnt out in a porcelain furnace

BURN-OUT

Refractory models should be dried for 5 mins. at the open hearth of a normal burn out furnace set at 600°C. Once dry they should be burnt out at 1000°C for 5 mins to drive off ammonia gas under extraction. This burn-out process normally takes ~ 45mins.

Subsequently refractory models may be burnt out and hardened in a porcelain furnace either with or without vacuum at 1090°C for 5 min. using a ramp rate of 40 - 60°C / min and a furnace entry temperature of 500°C.

2. Models burnt out in a normal burn-out furnace.

Refractory models should be dried for 5 mins. at the open hearth of a normal burn out furnace set at 600°C. Once dry they should be burnt out and hardened at 1090°C for 5 mins. using the normal 1-2 hr cycle.

PROPERTIES

Work time	4.5 mins.
Set expansion	0.52
Shrinkage (1090°C 5 min)	0.52
Net overall Exp./Shrinkage	0.0
Thermal expansion	0.96 at 850°C.

Notes

*The appropriate liquid to powder ratio must be measured accurately. Excess liquid will cause the final refractory to be soft, making “working off” at the margins more difficult.

†If a surface tension reliever (debubbleiser) is used on silicone moulds they should be dried thoroughly before introducing refractory mixture.