NO-BAKE Systems RESIL



Inorganic system for the No-Bake process

The Resil inorganic no-bake system consists of a sodium silicate binder and a liquid organic ester, as hardening agent. When added to a sand mixture containing the alkaline sodium silicate, the organic esters hydrolyse at a controlled rate, reacting to form a silica gel which bonds the aggregate. A typical addition rate is 3 to 4% based on sand with an addition of ester of about 10-20% based on the silicate solution.

The system is sulphur and nitrogen free. No odour and smoke are generated on pouring.

Reaction mechanism

Resil + Ester Hardener



Polysilicate + Water/Alcohol

The silicate no-bake system works well with most types of sand. Contamination by acidic sands should be avoided.

Casting defects such as veining and expansion are minimal. Surface finish can be improved, if needed, by graphite or zircon paints.

Resil systems are recommended from small to large productions of any metal alloy castings. They perform very well on steel castings.





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Product	Name	Main features
Binders	Resil RT	Water based silicate
Hardeners	Catasil 5	High reactivity
	Alcadur 6N	Medium high reactivity
	Alcadur 3	Medium high reactivity
	Alcadur 11	Medium reactivity
	Alcadur 12C	Very low reactivity



Fig. 1 – Resil RT – Catasil 5

