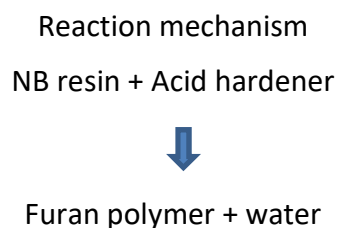


Furan resins for the No-Bake Acid process

Gioca NB and Giocaset® NB are furan liquid binders with or without phenolic or ureic components.

Depending on the quality of the new or reclaimed sand used they are added in percentages varying from 0.7% to 1.2% b.o.s. They cure at room temperature by the addition of an organic acid such as toluene sulphonic acid, xylene sulphonic acid, benzene sulphonic acid and their blends.



According to their nitrogen content Gioca NB e Giocaset® NB binders can be split into the following families.

Nitrogen	Product	Free Furfuryl Alcohol (%)	Water (%)	Main Features	Toxic Classific.*
< 1%	Gioca NB95F	58	8	Nitrogen free	T
	Gioca NB93F-Flex	90	2	Flexibilized, reduced cracks	T
	Giocaset® NB 2500	25	13	Low free formaldehyde, non toxic	NT
	Gioca NB 83F	83	14	Low free formaldehyde	T
	Giocaset® NB 2553	32	19	Phenol-Furan resin, non toxic	NT
	Giocaset® NB 2554	33	19	High resistance to water coating, non toxic	NT
	Giocaset® NB 4000	40	8	Excellent through cure, non toxic	NT
	Giocaset® NB 4000S	40	12	Delayed reactivity, non toxic	NT
1-3%	Gioca NB 95FS	56	9	Low free formaldehyde	T
	Gioca NB 83FC	81	8	Long bench life	T
< 5%	Gioca NB 4F	62	16	High strength	T

*, T – Toxic, NT – Non Toxic

Gioca NB e Giocaset® NB binders perform well with a variety of metals and conditions. They are recommended for steel, iron and non-ferrous alloy castings in small and medium production runs. They are also typically used for heavy section castings with a weight of more than 100 tons.

REVISION No. 0
DATE 23/02/2023

NO-BAKE Systems

GIOCA NB and GIOCASET® NB



Furan resins are used in combination with the hardeners on the following table.

Family	Name	Composition	Sulfuric Acid (%)	Inorganic Sulfur (%)
Strong	Hardener H 900	BSA	2.0	0.7
	Hardener H 760	BSA, TSA	2.0	0.7
	Hardener H 715	BSA, XSA	12.5	4.1
Medium Strength	Hardener H 60/0.4	TSA	0.4	0.1
	Hardener H 60/1.2	TSA	1.2	0.4
	Hardener H 50	TSA	1.2	0.4
Weak	Hardener H 35	TSA	1.2	0.4
	Hardener H 270	TSA	1.0	0,3
	Hardener H 28	TSA	1.2	0.4
	Hardener H 260	TSA	0.7	0,2

N.B.: it is absolutely essential to avoid direct contact between resins and acids in absence of sand.



Fig. 1 – Giocaset® NB 4000

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