

Two Part Phenolic Resin Acid Cured No Bake Binder System

CERAREZ

Product Data Sheet

PRODUCT: CERAREZ-R-201 is a Phenol-Formaldehyde resole resin cured by CERAREZ-C-210. The process is known as Phenolic acid two part no bake. This process is recommended and suitable for very large, thick and heavy section castings. The process is suitable for castings of any type of metal, irrespective of its weight.

CERAREZ-R-201 is reddish brown, clear liquid with no or very low nitrogen content. It has very less odor and irritating smell.

APPLICATIONS:

CERAREZ-R-201 along with CERAREZ-C-210 is used for making silica sand moulds and cores for steel, iron and non-ferrous castings. The process work well with fresh sand as well as reclaimed sand. The used sand of CERAREZ can be reclaimed mechanically up to 80-85%. The addition level of CERAREZ-R-201 with its catalyst gets substantially reduced compared to fresh sand. CERAREZ-R-201 contains proprietary additive which makes process easy for stripping and flexibility in mould handling. The process offers good thorough curing characteristics; hence there is no sagging or deformation of cores or moulds.

CERAREZ-R-201 can be used for flask less moulding system.

PHYSICAL PROPERTIES:

CERAREZ

PROPERTIES	CERAREZ R-201	CERAREZ C-210
Appearance	Reddish brown clear liquid	Reddish brown clear liquid
Sp. Gravity @30°C	1.16 – 1.20	1.20 – 1.30
Viscosity by B4 cup@30°C	30 – 80 seconds	13 – 20 seconds
Free formaldehyde	< 0.5%	-

THERMOCHEM PROCESSES PVT. LTD.

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THERMOCHEM
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Storage temperature	15 -30°C	15 – 30°C
Shelf life from date of manufacture	2 months	12 months

CERAREZ-C-210 is available in wide range, to suit the seasonal demands of bench life, strip time and for metallurgical properties.

SAND MIX PREPARATION:

Dry silica sand [AFS 50-65]

(free from carbonates and chlorides) -100 parts

CERAREZ-R-201 - 1.5- 2.0% based on sand

CERAREZ-C-210 - 30-60 % based on **CERAREZ-R-201**

Note:- For good quality reclaimed sand, addition level will be

CERAREZ-R-201 - 1.0- 1.5% based on sand

CERAREZ-C-210 - 30-60 % based on **CERAREZ-R-201**

Sand mixing can be done in either batch or continuous mixer, but one should ensure for no free resin lumps in sand mix.

Addition level of **CERAREZ-C-210** controls the bench life and strip time.

Mixing cycle:

Dry silica sand + **CERAREZ-C-210** → mix for 1 – 1 ½ minutes

+ **CERAREZ-R-201** → mix for 2-3 minutes

These are typical mixing times, which can vary with speed and type of mixer.

Bench Life- 5-15 minutes

Stripping time–20-60 minutes.

STRENGTH COMPRESSIVE (Resin-1.5% of sand, Catalyst-40% of Resin)

Time	Strength in kg/cm²
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1 Hr.	5-10
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4 Hrs.	15-20
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24 Hrs.	>30
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Strength will vary with quality of sand and ambient atmospheric conditions.

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Mould & Core Wash: We recommend water base refractory wash.

SHELF LIFE:-

CERAREZ-R-201 – 2 months from date of manufacturing

CERAREZ-C-210 – 1 year from date of manufacturing.

STANDARD PACKING:-

CERAREZ-R-201 – 200/225 kg MS/ HDPE drums.

CERAREZ-C-210 – 50/100/225 kg HDPE carboy/drum.

STORAGE & HANDLING:

CERAREZ-R-201 and **CERAREZ-C-210**, should stored separately, away from direct source of heat, moisture under roof at below 30°C

Never mix **CERAREZ-R-201** and **CERAREZ-C-210** together in a container, without sand.
Direct mixing of **CERAREZ-R-201** and **CERAREZ-C-210** cause violent exothermic reaction.

Handle **CERAREZ-R-201** and **CERAREZ-C-210** with proper care by using safety tools like chemical resistance hand gloves, safety goggles

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