

WACKER® CATALYST C 05

Catalysts

WACKER® CATALYST C 05 is a highly-active, diluted platinum catalyst used for the thermal curing of solvent-based and solvent-free, addition-crosslinking silicones.

Properties

- Very high and constant catalyst activity
- Ideally suitable for automated mixing units
- Rapid curing of addition-crosslinking silicone systems
- Miscible with silicones in all proportions

Specific features

- Catalyst
- Solvent-free

Technical data

General Characteristics

Property	Condition	Value	Method
Viscosity, dynamic	25 °C	approx. 565 mPa·s	-
Platinum content	-	approx. 0.115 %	-
Appearance	-	clear, oily liquid	-
Color	-	colorless	-
Density	20 °C	0.97 g/cm ³	DIN 51757

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Store in a dry and cool place.

Applications

- Baking Paper
- Composite Release Coatings
- Food & Baking
- Graphics
- Industrial Applications
- Label
- Medical / Hygiene
- Release Coatings
- Roofing & Bitumen
- Tapes & Electronics

Application details

WACKER® CATALYST C 05 is dissolved in a reactive silicone polymer, which is incorporated into the cured rubber during the curing process. Combined with DEHESIVE® silicone polymers, it is excellently suited for providing various substrates, such as paper and films, with a silicone coating that exhibits release properties towards tacky products used in technical, health, hygiene and food sectors.

Processing:

WACKER® CATALYST C 05 must be added to the mixture of DEHESIVE®, CRA® modifier and crosslinker. During addition, stirring should be as rapid as possible to avoid local over-concentrations of the platinum catalyst, which cause premature curing indicated by formation of gel particles ranging in color from brown to black. It is also important that the platinum catalyst is always added as the last component to the homogeneous mixture of polymer and crosslinker.

Its relatively low platinum content means that WACKER® CATALYST C 05 is ideally suited for the use in automated mixing and metering equipment. Furthermore, problems with gelation are easier to keep under control when WACKER® CATALYST C 05 is employed. Before switching from concentrated to diluted catalysts and vice versa, lab tests must be carried out to make sure that this will have no effect on the release values.

WACKER® CATALYST C 05 contains a considerable amount of a reactive silicone polymer as solvent for the platinum complex. This must be taken into account when WACKER® CATALYST C 05 is used in formulations containing CRA® modifier (e.g. when increasing or decreasing the amount of WACKER® CATALYST C 05 in the formulation). The release force for the cured silicone coating will remain constant as long as the percentage of CRA® modifier does not change.

Suitable materials for mixing vessels, stirrers, pumps, tubes, filters, etc. are stainless steel, polyethylene, polypropylene, Teflon and other fluorine polymers, as well as products coated or lined with these materials. If good catalyst activity is to be maintained, it is essential to avoid deactivation of the platinum catalyst. This may occur as a result of contact with the abovementioned equipment, with the ambient air, with unsuitable rolls in the coating equipment, with the customer's additives, or even with the substrate to be coated. If heavy metals (e.g. lead, copper, zinc, iron, chromium or tin) or sulfurous, nitrogenous or phosphorous organic compounds are present in any of the above materials, curing may be impaired or even prevented.

Packaging and storage

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons. Prolonged exposure to air and light, especially UV light, may result in an increased brown discoloration, or development of turbidity. Since the colloidal platinum formed is also catalytically active, it is safe to assume that a brown discoloration and slight turbidity will not have a detrimental effect on the performance of the product.

Safety notes

Platinum catalysts react vigorously with proton donors. Undiluted catalysts should therefore not come into direct contact with siloxane crosslinkers, since this may cause a spontaneous, uncontrolled liberation of hydrogen. Especially in the presence of reactive organic solvents (e.g. esters and ketones) and flammable materials with a large surface area (e.g. paper), spontaneous ignition may then occur.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

QR Code WACKER® CATALYST C 05



For technical, quality or product safety questions, please contact:

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