



KARSTEDT'S CATALYST

PLATINUM BASED CATALYSTS FOR SILICONE POLYMERS



KARSTEDT'S CATALYST FROM HERAEUS PRECIOUS METALS

Hydrosilylation describes the reactions to build up high-molecular organosilicon compounds, which serve as the basis for manufacturing silicones. Today's silicones are used in a broad range of applications ranging from dental, automotive, building, polymer applications to paper coatings.

The well-known Karstedt's Catalyst is the most used catalyst for such reactions, as it is highly active, easy to handle and safe to use. Heraeus Precious Metals is a major supplier of Karstedt's Catalysts for the silicones market. The range of catalysts provides options for cure characteristics for a wide range of applications and can be shipped in various dilutions with polymers to meet customer needs.

Heraeus can formulate the activity of the Karstedt's Catalysts according to the desired catalyst concentration, stability and viscosity. A low turbidity upon mixing with polymers can be expected from the pale, colorless catalyst solution. Heraeus' catalysts are produced with a narrow variance, which minimizes catalyst waste while delivering constant activity designed for a steady process.

Homogenous catalysts are typically employed in very low concentrations (30–100 ppm) and remain in the silicones. Where homogeneous catalysts are not an option, Heraeus also offers a broad range of suitable heterogeneous catalysts.

FEATURES AND BENEFITS OF HERAEUS' KARSTEDT'S CATALYST

Benefits

- Karstedt's Catalysts are more reactive and selective than chloroplatinic acid
- Karstedt's Catalysts require low platinum concentrations
- Platinum catalyzed cures do not generate volatile byproducts
- Heraeus catalysts offer a consistent reactivity profile for less variance in customer processes

Features

- Customized platinum levels available
- Specialized packaging available
- Variety of activities for room temperature and high temperature cure profiles

SERVICES FOR YOUR BENEFIT

Global Production

With our global production sites in Germany, the US and China, we are able to produce close to our customers wherever they are and within customs borders, while maintaining the same high quality all over the world.

Technical Support and Troubleshooting

In addition to supplying Karstedt's Catalysts, we also offer our customers technical support and advice. We value open communication and true partnership.

Precious Metals Management and Sourcing

We are able to execute precious metal trades under real-time market conditions through our worldwide trading sites. In addition to sales and purchase transactions, we can also provide various financing options.

DIFFERENT TYPES OF KARSTEDT'S CATALYSTS TO MEET YOUR NEEDS

LOW TURBIDITY CONCENTRATE

Our standard Low Turbidity catalyst helps to reduce the often occurring turbidity caused by mixing the catalyst into the silicone fluids. High clarity and low color can be expected from the final cured product.

It's a standardized material. The catalyst has a long shelf life and contains up to 23% platinum.



Left: Heat Resistant catalysts before and after stress test (14 d, 50°C storage)

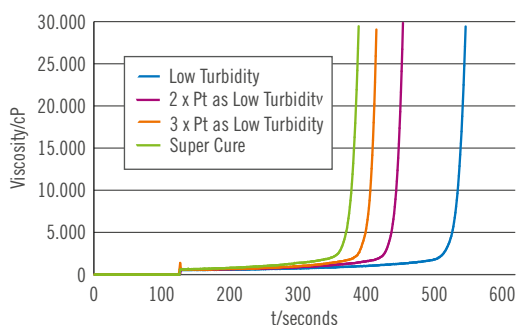
Right: Low Turbidity catalysts before and after stress test

SUPER CURE

Our Super Cure catalyst was developed to improve the curing time and reduce the platinum content. Customers can reduce platinum by more than 50% while achieving the same curing result.

Super Cure is an advanced material and is optimized for fast reactions at room temperature. It contains up to 15% platinum.

Curing Test of Karstedt's Catalyst

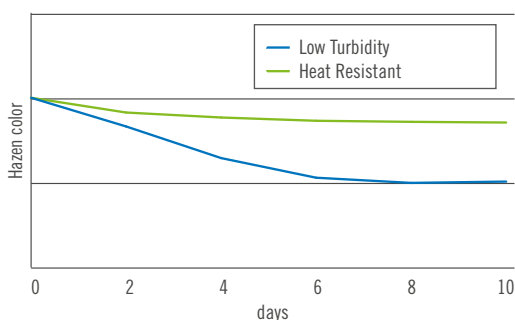


HEAT RESISTANT

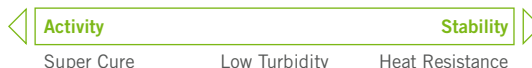
Our Heat Resistant catalyst is designed especially to be highly resistant to heat. The product can be stored and processed at high temperatures while retaining its good reactivity and low color.

The catalyst is very stable and offers high usability and processability. It contains up to 15% platinum.

Stability at 50 °C



We can adjust the activity of the Karstedt formulation



WE CAN PROVIDE YOUR KARSTEDT CATALYST IN VARIOUS SOLVENTS:

- **End capped Vinyl Silicone fluids**
(various viscosities: 200, 500, 1000)
- **Organic solvents** (Toluene, Xylene, other)
- We can design **custom made solutions**

Heraeus Precious Metals

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