Which SiH Crosslinker to choose?

Crosslinkers 100 and 200 is a series of pure, short chain polydimethyl siloxane polymers with multiple SiH groups per chain. The Crosslinkers 100 series possesses only side chain SiH, whereas the Crosslinkers 200 series has additional terminal SiH groups.

These Crosslinkers are the chemical counterpart to the vinyl siloxanes in addition curing silicones. Together they are forming the actual elastomeric network.

Crosslinker 100 series

Crosslinker 200 series

I. Elasticity vs. Strength

For soft gels and elastomers (Shore A <10) Crosslinkers with low SiH contents such as CL 180, CL 122 and CL 120 are preferred. For harder products any other grade is suitable.

II. Quick Cure

SiH contents above 4 mmol/g support a quick viscosity and strength build-up in the curing process. Additionally, the more active, terminal SiH groups of CL 2xx accelerate the curing. Remark: The general kinetic profile is given by Catalyst/Inhibitor combination—see separate document!

III. Low viscous formulations

Some very flowable formulations (<1000 mPas) may require the use of low viscous crosslinkers as CL 200 or CL 101 to match the resulting flow profile. For even lower viscosities the Modifier 700 series can be used see separate document.

IV. Specialty: Crosslinker 190

CL 190 is fully saturated with SiH groups. It can be used in combination with other grades to improve adhesion or to formulate hydrogen blown silicone foams. Formulations with CL 190 have to be observed for potential post curing effects (hardness increase during storage).



