Technical Application Sheet

SMART CHEMISTRY WITH CHARACTER.

QSIL553
Thermally Conductive Silicone Potting Compound

Storage and Re-agitation Guide

QSIL553 is a liquid compound of high density powders and liquid silicone polymers. The effects of gravity will cause the separation of the heavy fillers to the bottom of the container and eventually form a hard, "clay " like layer which is not possible to disperse by manual mixing or rotational disperser blades and can only be re-dispersed by drum rolling or 3 axis gyroscopic mixer / tumbler for 6 hours.
There are a number of options available for each package of QSIL553.

310 ml Cartridge Packaging

Inversion of the cartridges every 14 days at ambient temperatures of 10 to 40°C will prevent any sedimentation forming and the product will be suitable for use for 12 months from the date of manufacture

Chilled storage at -5 to 10 °C will increase the viscosity to 11000 - 8000 mPa.s and extend the time to 20 - 26 days before the cartridge needs inverting.
The cartridge will need to equilibrate at 20°C for 8 - 20 hours before dispensing.
Inversion at the specified intervals will prevent any sedimentation forming and the product will be suitable for use for 12 months from the date of manufacture.

600 ml Cartridge Packaging

Inversion of the cartridges every 14 days at ambient temperatures of 10 to 40°C will prevent any sedimentation forming and the product will be suitable for use for 12 months from the date of manufacture

Chilled storage at -5 to 10 °C will increase the viscosity to 11000 - 8000 mPa.s and extend the time to 20 - 26 days before the cartridge needs inverting.
The cartridge will need to equilibrate at 20°C for 11 - 28 hours before dispensing.
Inversion at the specified intervals will prevent any sedimentation forming and the product will be suitable for use for 12 months from the date of manufacture.

Pails: 1 litre, 5 litres and 20 litres

Inversion of pails every 14 days at ambient temperatures of 10 to 40 will prevent any sedimentation forming and the product will be suitable for use for 12 months from the date of manufacture.

Chilled storage at -5 to 10 °C will increase the viscosity to 11000 - 8000 mPa.s and extend the time to 20 - 26 days before the pail needs inverting.
The 1 litre pail will need to equilibrate at 20°C for 19 - 47 hours before dispensing.

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The 5 litre pail will need to equilibrate at 20°C for 30 - 75 hours before dispensing
The 20 litre pail will need to equilibrate at 20°C for 48 to 121 hours before dispensing
Inversion at the specified intervals will prevent any sedimentation forming and the product will be suitable for use for 12 months from the date of manufacture.

Mechanical agitation option, storage at ambient temperatures of <40°C for periods of >14 days, use of a 3 axis mixer such as "iMix Gyroscopic Mixer" is recommended
http://www.chameleon.ie/start/index.php/products/gyroscopic-mixers

Mixing for 6 hours before use will ensure the material is uniform, even if hard sediment is present in the pails. The material will remain useful for 12 months at temperatures of 10 - 40°C if mixed before use.

Summary Table

Package	Storage Temperature, °C	Pack Inversion Interval, days	Temperature Equilibrium time at 20°C, hours	Gyroscopic mixing intervals, days	Gyroscopic mixing duration, hours
310 ml	40	11	N/A	N/A	N/A
	20	14	0	N/A	N/A
	10	20	8	N/A	N/A
	-5	26	20	N/A	N/A
600 ml	40	11	N/A	N/A	N/A
	20	14	0	N/A	N/A
	10	20	11	N/A	N/A
	-5	26	28	N/A	N/A
1 litre	40	11	N/A	11 to 365	6
	20	14	0	14 to 365	6
	10	20	19	N/A	N/A
	-5	26	47	N/A	N/A
5 litres	40	11	N/A	11 to 365	6
	20	14	0	14 to 365	6
	10	20	30	N/A	N/A
	-5	26	75	N/A	N/A
20 litres	40	11	N/A	11 to 365	6
	20	14	0	14 to 365	6
	10	20	48	N/A	N/A
	-5	26	121	N/A	N/A

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