



SR 355S

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Description

Momentive Performance Material SR355 is a 100% solids, dry silicone resin and may be used as a binder for precision moulded parts and in other high temperature applications where a hard resin and low shrinkage after firing is desired. SR 355 is also used as a base resin for moulding compounds.

Key Features and Benefits

FEATURESEase of Handling. May be used in dry or wet mixes. Low Loss on Ignition. Thermogravimetric analysis at 900 °C in air shows weight retention of greater than 80%. Precise Tolerance Finishes. High weight retention on firing can yield parts with low shrinkage and outstanding surface finish.Improved Processing. Facilitates production of parts with excellent green strength, minimizing rejects due to handling.

Typical Physical Properties

Property	Value
Solids Content, %	100
Physical Form	Dry Friable Granular Particles
Specific Gravity	1.08
Colour	Off White to Light Straw
Softening Point	32 °C Becomes Fluid @ 93 °C Has Low Viscosity @ 120 °C
Shelf Life	6 months @ 21 °C12 Months @ 4 °C

(Not intended for use in preparing specification)

Potential Applications

Momentive Performance Materials SR 355 is applied as a binder in mineral-filler moulding compounds to produce moulded parts with precision tolerances, such as insulators, connectors, and terminal boards. Typical resin levels are 10-30% by weight to fillers. Parts made from mixtures containing SR 355 may be used at temperatures up to 1093 °C, depending upon choice of filler.SR 355 containing material may also be used to make moulds and cores to cast precision metal parts, eliminating the need for machining. Such cores allow internal design configurations which are otherwise impossible.

TYPICAL PROPERTIES OF COMPOUNDS MADE WITH SR355

Property	Value
Colour	Optional
Form	Granular or Preform
Fillers	Fused Silica, Silicates,& Other Minerals
Moulding Time (160-190 °C), minutes	2

Moulding Pressure (MPa)	4.2
Post Cure Time @ 225 °C, hrs.	2
Shrinkage During Moulding, cm/cm	0.003

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

The warranty period is 3 months from date of shipment from Momentive Performance Materials if stored in the original unopened container at temperatures below 27 °C.

Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at www.momentive.com or, upon request, from any Momentive Performance Materials (MPM) representative. **For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center.** Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Processing Recommendations

WET MIXING

SR 355 may be dissolved in solvent to facilitate mixing with the filler. This technique involves dissolving the SR 355 in a fast evaporating solvent such as toluene, methyl-ethyl-ketone, etc., to a silicone resins content of 30-50%. A soluble catalyst such as a tertiary amine, or soluble metallic soap catalyst such as zinc octoate (in levels up to 0.25% based on silicone solids) may be added to the resin solution to enhance green strength properties. Filler is added to the resin solution and mixed thoroughly. After mixing, the solvent may be evaporated by spreading the mixture on drying pans or by spray drying. High temperatures should not be used to evaporate the solvent. Room temperature high velocity air may be used to accelerate solvent removal. After the solvent has been removed the compound will require granulation to render it in a form suitable for moulding. As in the case of the dry mixing, care should be used to keep the mixture cool during granulation operation. The compound, after granulation, should be stored under refrigeration in a close container to obtain good shelf stability.

DRY MIXING

When dry mixing is used, resin particle size may be reduced by grinding and screening (for example, to 325 mesh) to assure uniform mixing. High intensity cooled mixers often eliminate regrinding especially at the higher resin levels. Lead carbonate may be used as the catalyst in the range of 0.5 to 1% based on resin content of the mix.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Availability

SR355 may be ordered from Momentive Performance Materials, the Netherlands, the Momentive Performance Materials sales office nearest you or an authorized Momentive Performance Materials product distributor.

Contact Information

For product prices, availability, or order placement, contact our customer service by visiting momentive.com/ContactSilicones.

For literature and technical assistance, visit our website at: www.momentive.com

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