

# Terratek® SC

## SC65

U.S. Patent No. 8,802,754 B2

### Product Description

**Terratek® SC65** is a proprietary blend of wheat starch and polypropylene for injection molding applications. SC 65 contains 65% wheat starch by weight; however, a range of properties can be achieved by altering the starch to plastic ratio and by the inclusion or admission of other additives. Formulations containing anywhere from 30% to 65% starch are available upon request.

*Preliminary Data- Pending Third-Party Evaluation*

Sustainability Guide	
Biobased content ASTM 6866	-
Biobased content by weight	-
Recycled content	-
Energy use	-
Compostable	-

<u>Property</u>	<u>Test Method</u>	<u>Value</u>
Specific Gravity	ASTM D792	1.2
Shrinkage		0.011 in/in
Melt Index (230C 2.16kg)	ASTM D1238	10.0 g/10 min
Tensile Strength	ASTM D638	3,770 psi
Tensile Modulus	ASTM D638	375,826 psi
Flex Strength	ASTM D790	7,893 psi
Flex Modulus	ASTM D790	400,000 psi
Elongation		2.17 %
Notched Izod	ASTM D256	0.3 ft lb/in

### General Processing Recommendations

Due to the hydroscopic nature of the natural fillers in this material, pre-drying the resin may be required. Green Dot recommends that the moisture level of the resin not be above 0.3% as measured by loss-in-weight at 300°F for 15 minutes. If the moisture is above the recommended level, the resin should be dried in a desiccant dryer at 150°F until the moisture is at or below the recommended level. Failure to dry the material can cause processing problems normally associated with moisture in plastics. For best molding results, larger gates and runners are recommended. The injection pressure required to fill the mold is much higher than typical injection molding grade plastics.

Typical injection molding temperatures are listed below, these are a guide and may need to be changed based on the particular application:

Rear	350°F to 360°F
Middle	350°F to 360°F
Front	360°F to 375°F
Nozzle	360°F to 375°F
Mold	60°F to 170°F

The melt temperature of the resin should remain below 400°F to prevent the material from discoloring and having a burnt odor.

### Packaging and Storing

Terratek® SC65 resin is typically packaged in a sealed plastic-lined Gaylord at 1200 lbs/Gaylord. The product should be stored in a cool, dry, and sanitary area to achieve maximum stability.

The information and recommendations in this sheet are based on our experience and analysis using standard procedures, and are believed to be accurate and reliable. However, they serve merely as typical guides, and are presented in good faith for the benefit of our customers. No guarantee, expressed or implied, is made regarding accuracy of the analysis, patent infringement, liabilities, or risks involved from the application of our products.	Issued:	3/11/10
	Revised:	10/08/20
	Approved:	R&D/QC