

# COMPOUND PP

High-Impact, High-Gloss PP Compound Resins

▶ SH52

## ● Description

High gloss PP SH52 feature superior gloss and impact-resistance, and a balance of properties suitable for electric heating equipment.

Compared with other brands of Homogeneous PP, Hanwha Total products offer higher impact-resistance and long-term thermal stability, making them ideal for use in electric heating equipment and food-related components.

## ● Characteristics

Compound PP SH52 grades have the required heat resistance and mechanical-properties balance for use in electric heating equipment.

As these compound PP grades also possess superior gloss, steam-resistance and long-term thermal stability, they are ideally suited for use in small household appliances such as the electric heating equipment.

- ▶ High steam-resistance and durability at high temperatures make these grades suitable for electric heating equipment
- ▶ Superior processability and surface gloss



## ● Applications

- ▶ Round rice cooker bases, outer and inner covers
- ▶ Jars, kettles, hot pots
- ▶ Electric heating equipment requiring high glossiness and long-term thermal stability

## ● Major Property Requirement

- ▶ Heat resistance and rigidity
- ▶ Long-term thermal stability, and steam-resistance
- ▶ Food-related products requiring sanitation

## ● General Processing Guide

The melt indices of PP SH52 is 14g/10min. The product is manufactured under general high glossy PP processing standards, and typical processing environment is as follows:

Conditions		Data
Cylinder Temp.	Feeding zone	170 ~ 190
	Plasticizing zone	180 ~ 200
	Metering zone	180 ~ 210
Nozzle Temp. (°C)		180 ~ 210
Mold Temp. (°C)		50 ~ 70
Injection Pressure(kg/cm <sup>2</sup> )		400 ~ 700
Back Pressure (kg/cm <sup>2</sup> )		5 ~ 20
Injection Speed (%)		40 ~ 70

The actual injection molding conditions should be adjusted by considering molding machine type, mold design and part size.



## ● Physical Properties

### ▶ Resin Properties

Properties	Test Method	Condition	Unit	SH51	SH52
Physical Properties					
Melt Index	ASTM D1238	230℃	g/10min	12.0	14.0
Specific Gravity	ASTM D 792	-	g/cm <sup>3</sup>	0.98	1.07
Mechanical & Thermal Property					
Tensile Strength (Yield)	ASTM D638	50mm/min	kg/cm <sup>2</sup>	370	350
Elongation (Break)			%	50	90
Flexural Modulus	ASTM D790	5mm/min	kg/cm <sup>2</sup>	19,000	19,500
Izod Impact Strength	ASTM D256	23℃	kg.cm/cm	4.0	3.5
Heat Distortion Temperature	ASTM D648	4.6kg/cm <sup>2</sup>	℃	120	122
Surface Hardness	ASTM D785	Rockwell	R-Scale	101	102
Processing & Rheological Property					
Mold Shrinkage	HANWHA TOTAL	2mm(t)	%	1.4~1.8	1.3~1.7
Recognition					
UL94	-	-	-	HB	HB
Food Application				YES	YES

\* Data shown above are representative values for reference purposes only and not to be construed as specifications.



## ● **Food Contact Application**

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- ▶ There may be some limitation to apply Hanwha Total SH52 to the food packaging
- ▶ Thus, the verification on the suitability is necessary. In case you might need additional information, please contact Hanwha Total Composite Development Team.

## ● **Other Information**

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The information in this document can be used for reference only, not to be construed as specification. Customers are responsible for determine whether our product and information is suitable for their particular purpose and for the compliance with related law.

Hanwha Total assumes no obligation or liability for the information in this document.

