

# **AUTOMOTIVE & BATTERY**







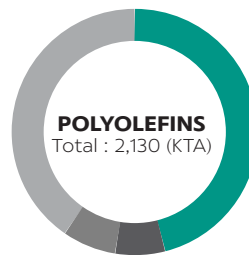
## About SCG Chemicals or SCGC

SCG Chemicals or SCGC is one of the leader in sustainable chemical innovations and manufacturing in Thailand and ASEAN that offers a full range of petrochemical products ranging from upstream production of olefins to downstream production of 3 main plastics resins: polyethylene, polypropylene, and polyvinyl chloride including finished products.

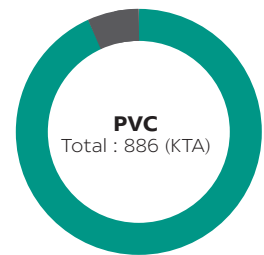
SCGC is committed to conducting business in line with Environmental, Social, and Governance (ESG) and achieving Sustainable Development Goals (SDGs). SCGC is developing new technology and innovation to create high value added products (HVA) and holistic service solutions concerning growing areas such as circular economy, medical & healthcare, and electric vehicle (EV) to better meet diverse places and emphasis demands sustainable environmental stewardship.

### OUR PRODUCTION CAPACITY (AS OF 2021)

**TOTAL CAPACITY : 3,016 KTA (PE / PP / PVC)**



HDPE	980 KTA
LLDPE	140 KTA
LDPE	150 KTA
PP	860 KTA



PVC	850 KTA
PVC Paste	36 KTA

## ESG Strategic Directions



**“INNOVATION THAT’S REAL”**





## AUTOMOTIVE & BATTERY

**SCGC™ PP resins are high-quality plastics that can replace existing heavy materials without compromising on the structural integrity, performance, or safety of vehicles.**

The advent of electric vehicles is a welcome change that helps to usher in a paradigm shift from petroleum-based fuels to cleaner energy sources. However, decarbonizing vehicles is not without difficulty, as manufacturers need to overhaul the automobiles for increased performance whilst maintaining high safety standards. Fortunately, plastic has emerged as the hero of electric vehicles, thanks to its lightweight properties, sturdiness, and processability.

As an industry leader in petrochemicals, SCGC offers a complete range of polypropylene (PP) resins that can be used in electric vehicles. SCGC™ PP is lightweight yet strong, with high impact resistance. It also has low odor and a low volatile organic compounds (VOCs). This enables manufacturers to reduce the density of materials in various

applications, creating thinner wall parts and converting polymer foam through foam fabrication. Therefore, existing materials are able to be replaced with high-quality plastics without compromising on the structural integrity, performance, or safety of vehicles.

As plastics are being increasingly used in vehicles, SCGC strives for a strong collaboration with manufacturers to develop materials that provide better aerodynamics, aesthetics, safety, and improve energy efficiency, contributing to the reduction of greenhouse gases.

With sustainability at the core of our business, SCGC is passionately committed to improving people's lives and protecting the world for future generations.

### Design for Sustainability

3 GOOD HEALTH  
AND WELL-BEING



12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



13 CLIMATE  
ACTION







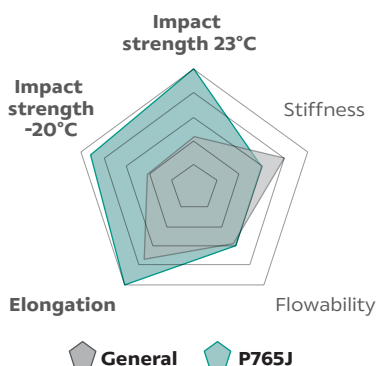
A silver car is shown from the side, driving on a winding asphalt road that curves to the right. The road has a yellow line marking. The background is a dense forest of green trees, with a blurred effect suggesting motion. The sky is bright and hazy. The overall scene is captured with a motion blur effect, emphasizing speed and movement.

**INNOVATION THAT'S REAL**

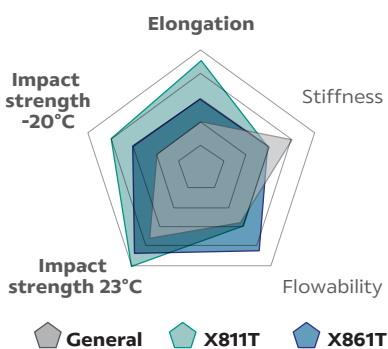




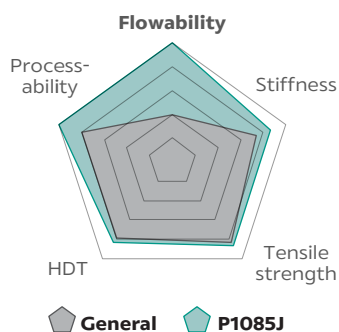
# SCGC™ PP: For Lightweight and Safety Automotive Parts



P765J	
<b>Characteristics</b>	Excellent impact resistance, achieving no break level, low VOCs
<b>Applications</b>	Exterior & interior parts



X811T, X861T	
<b>Characteristics</b>	High impact resistance, medium to high flowability
<b>Applications</b>	Exterior & interior parts



P1085J	
<b>Characteristics</b>	Stiffness and impact strength balance, very high flowability
<b>Applications</b>	Thin wall exterior parts

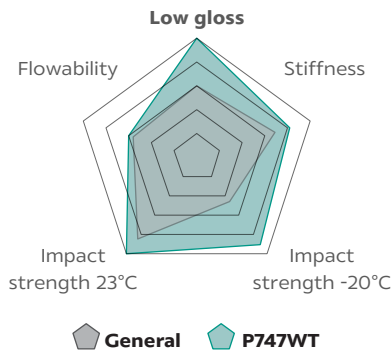


## High Flowability, High Impact Strength, and Excellent Ductility

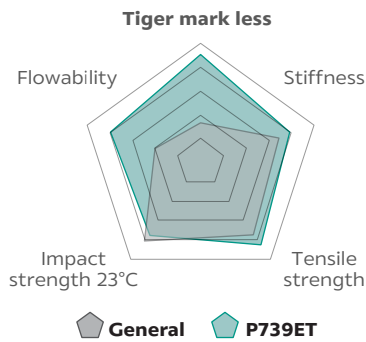
GRADE	P765J	X811T	X861T	P1085J
<b>Melt flow rate</b> [g/10min] ISO 1133 at 230°C, 2.16 kg	30	30	60	130
<b>Tensile strength at yield</b> [MPa] ISO 527	20	22	22	26
<b>Flexural modulus</b> [MPa] ISO 178	800	850	850	1,150
<b>Charpy impact strength at 23°C</b> [kJ/m <sup>2</sup> ] ISO 179	NB	11	9.5	4
<b>Heat deflection temperature</b> [°C] ISO 75 at 0.45 MPa	75	85	85	95
<b>Key characteristics</b>	- Excellent impact strength with not break level - Low VOCs	- Very high impact strength - Medium flowability	- Very high impact strength - High flowability	- Stiffness and impact strength balance - Very high flowability



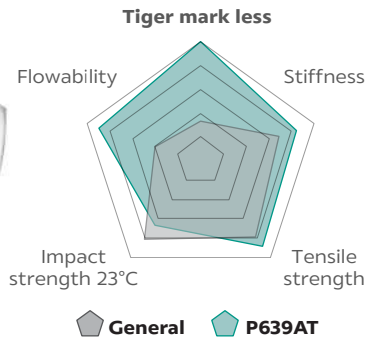
# SCGC™ PP: For Surface Aesthetic Automotive Parts



P747WT	
<b>Characteristics</b>	Low gloss, good stiffness and impact strength balance
<b>Applications</b>	Interior parts



P739ET	
<b>Characteristics</b>	Tiger mark less solution, medium flowability
<b>Applications</b>	Exterior & interior parts



P639AT	
<b>Characteristics</b>	Tiger mark less solution, high flowability
<b>Applications</b>	Exterior & interior parts





## High Crystallinity, Low VOC, and Low Gloss Property

GRADE	P747WT	P739ET	P639AT
<b>Melt flow rate</b> [g/10min] ISO 1133 at 230°C, 2.16 kg	30	55	80
<b>Tensile strength at yield</b> [MPa] ISO 527	24	27	28
<b>Flexural modulus</b> [MPa] ISO 178	1,200	1,270	1,350
<b>Charpy impact strength at 23°C</b> [kJ/m <sup>2</sup> ] ISO 179	9	6.5	6
<b>Heat deflection temperature</b> [°C] ISO 75 at 0.45 MPa	80	90	90
<b>Key characteristics</b>	<ul style="list-style-type: none"> <li>- Low gloss</li> <li>- Stiffness and impact strength balance</li> <li>- Medium flowability</li> </ul>	<ul style="list-style-type: none"> <li>- Aesthetics surface</li> <li>- Stiffness and impact strength balance</li> <li>- High flowability</li> </ul>	<ul style="list-style-type: none"> <li>- Aesthetics surface</li> <li>- Stiffness and impact strength balance</li> <li>- High flowability</li> </ul>



## SCGC™ PP: For Automotive Parts PP Block Copolymer Resins

GRADE	P440J	P640J	P686J
<b>Melt flow rate</b> [g/10min] ASTM D1238 @ 230°C, 2.16 kg	5	10	10
<b>Tensile strength at yield</b> [kg/cm <sup>2</sup> ] ASTM D638 @ Crosshead Speed 50 mm/min	270	280	290
<b>Flexural modulus</b> [kg/cm <sup>2</sup> ] ASTM D790	12,500	12,000	13,500
<b>Notched izod impact @ 23°C</b> [J/m] ASTM D256	118	98	120
<b>Heat deflection temperature</b> [°C] ASTM D648 @ 4.6 kg/cm <sup>2</sup>	100	105	115
<b>Key characteristics</b>	- Stiffness and impact strength balance	- Stiffness and impact strength balance	- High impact strength - High stiffness





## SCGC™ PP: For Automotive Parts PP Block Copolymer Resins

GRADE	P740J	P744J	P840J	P842J
<b>Melt flow rate</b> [g/10min] ASTM D1238 @ 230°C, 2.16 kg	27	30	43	40
<b>Tensile strength at yield</b> [kg/cm <sup>2</sup> ] ASTM D638 @ Crosshead Speed 50 mm/min	290	290	290	295
<b>Flexural modulus</b> [kg/cm <sup>2</sup> ] ASTM D790	12,500	14,500	12,500	14,500
<b>Notched izod impact @ 23°C</b> [J/m] ASTM D256	78	78	70	74
<b>Heat deflection temperature</b> [°C] ASTM D648 @ 4.6 kg/cm <sup>2</sup>	110	115	110	120
<b>Key characteristics</b>	- Stiffness and impact strength balance - Medium flowability	- High stiffness - Medium flowability	- Stiffness and impact strength balance - High flowability	- High stiffness - High flowability



## SCGC™ PP: For Automotive Parts PP Homopolymer Resins

GRADE	P401S	P400S	P701J	P901J
<b>Melt flow rate</b> [g/10min] ASTM D1238 @ 230°C, 2.16 kg	2.5	3.5	12	60
<b>Tensile strength at yield</b> [kg/cm <sup>2</sup> ] ASTM D638 @ Crosshead Speed 50 mm/min	350	350	350	360
<b>Flexural modulus</b> [kg/cm <sup>2</sup> ] ASTM D790	15,500	15,500	15,500	16,500
<b>Notched izod impact @ 23°C</b> [J/m] ASTM D256	41	40	34	38
<b>Heat deflection temperature</b> [°C] ASTM D648 @ 4.6 kg/cm <sup>2</sup>	110	110	110	125
<b>Key characteristics</b>	- Mechanical property balance	- Mechanical property balance	- Mechanical property balance	- Stiffness and impact strength balance - High flowability





## SCGC™ PP: For Automotive Parts PP Random Copolymer Resins

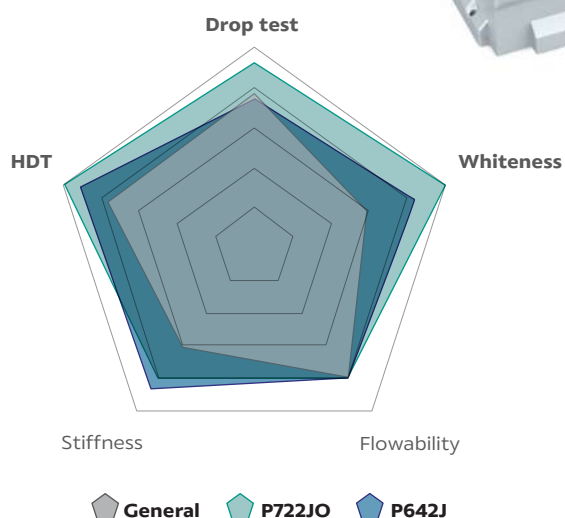
GRADE	P750J	P851JO
<b>Melt flow rate</b> [g/10min] ASTM D1238 @ 230°C, 2.16 kg	12	20
<b>Tensile strength at yield</b> [kg/cm <sup>2</sup> ] ASTM D638 @ Crosshead Speed 50 mm/min	300	320
<b>Flexural modulus</b> [kg/cm <sup>2</sup> ] ASTM D790	12,000	12,500
<b>Notched izod impact @ 23°C</b> [J/m] ASTM D256	65	60
<b>Heat deflection temperature</b> [°C] ASTM D648 @ 4.6 kg/cm <sup>2</sup>	90	100
<b>Key characteristics</b>	- High clarity - High stiffness - High gloss	- High clarity - High stiffness - High gloss - Medium flowability



## SCGC™ PP: For Battery PP Block Copolymer Resins

Recognized by the world's leading battery producers for over 20 years, SCGC™ PP block copolymer resins are especially designed for automotive battery cases and covers, providing excellent UV Resistance, thermal resistance, and brighter white, maintaining natural color longer than general PP resins.

With its high quality, SCGC™ PP block copolymer resins comply with Japanese Industrial Standards (JIS) and Deutsches Institut für Normung (DIN) standards.



P722JO, P642J	
<b>Characteristics</b>	High dimensional stability and whiteness with UV resistance
<b>Applications</b>	Battery cases and covers





## Designed for High Performance Battery Cases and Covers

GRADE	P722JO	P642J
<b>Melt flow rate</b> [g/10min] ASTM D1238 @ 230°C, 2.16 kg	10	10
<b>Tensile strength at yield</b> [kg/cm <sup>2</sup> ] ASTM D638 @ Crosshead Speed 50 mm/min	300	280
<b>Flexural modulus</b> [kg/cm <sup>2</sup> ] ASTM D790	13,000	14,000
<b>Notched izod impact @ 23°C</b> [J/m] ASTM D256	98	98
<b>Heat deflection temperature</b> [°C] ASTM D648 @ 4.6 kg/cm <sup>2</sup>	120	110
<b>Key characteristics</b>	<ul style="list-style-type: none"> <li>- High impact strength and stiffness</li> <li>- Good Processability</li> <li>- Good dimensional stability</li> <li>- Good UV resistance</li> </ul>	<ul style="list-style-type: none"> <li>- High stiffness</li> <li>- Contains UV stabilizer and anti-static agent</li> </ul>



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