AUTOMOTIVE
& BATTERY

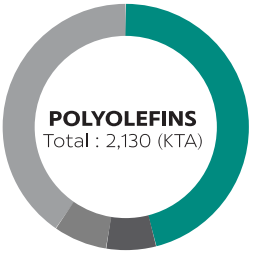
About SCG Chemicals or SCGC

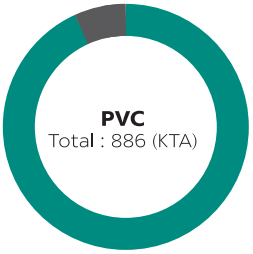
SCG Chemicals or SCGC is one of the leader in sustainable chemical innovations and manufacturing in Thailand and ASEAN that offers a full range of petrochemical products ranging from upstream production of olefins to downstream production of 3 main plastics resins: polyethylene, polypropylene, and polyvinyl 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	PVC	850 KTA
LLDPE	140 KTA	PVC Paste	36 KTA
LDPE	150 KTA		
PP	860 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.

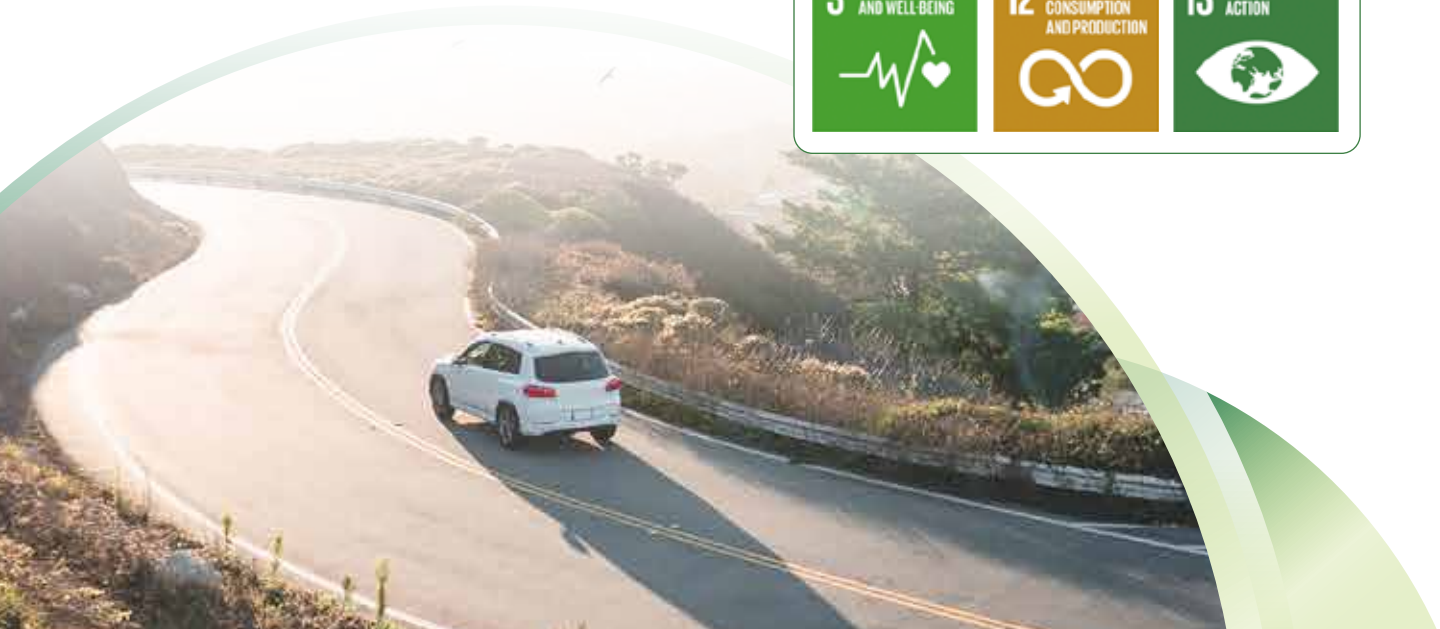
The advent of electric vehicles is a welcome change that helps to usher in a paradigm shift from petroleum-based fuels to cleaner energy sources. However, decarbonizing vehicles is not without difficulty, as manufacturers need to overhaul the automobiles for increased performance whilst maintaining high 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.

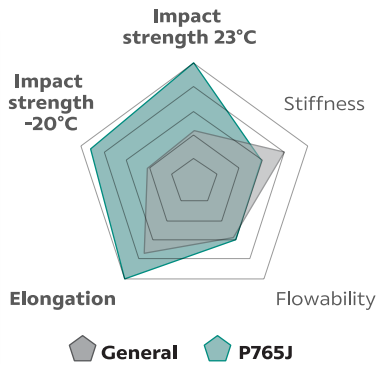
With sustainability at the core of our business, SCGC is passionately committed to improving people's lives and protecting the world for future generations.

Design for Sustainability

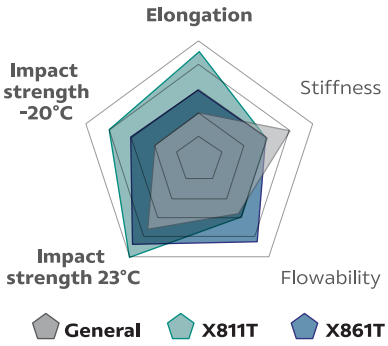



INNOVATION THAT'S REAL

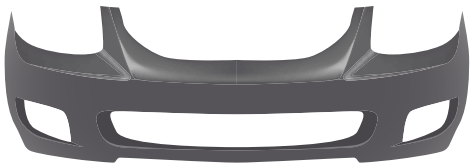
SCGC™ PP:
For Lightweight and Safety Automotive Parts

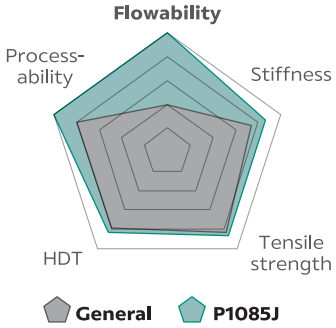


P765J	
Characteristics	Excellent impact resistance, achieving no break level, low VOCs
Applications	Exterior & interior parts



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



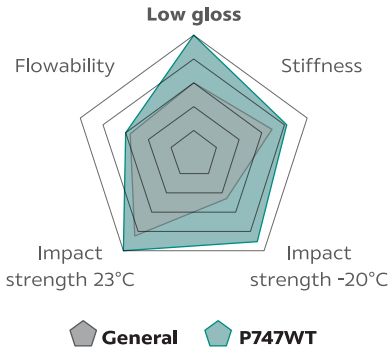


P1085J	
Characteristics	Stiffness and impact strength balance, very high flowability
Applications	Thin wall exterior parts

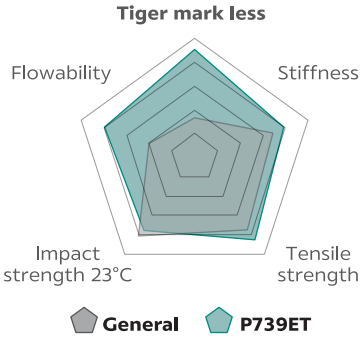
High Flowability, High Impact Strength, and Excellent Ductility

GRADE	P765J	X811T	X861T	P1085J
Melt flow rate [g/10min] ISO 1133 at 230°C, 2.16 kg	30	30	60	130
Tensile strength at yield [MPa] ISO 527	20	22	22	26
Flexural modulus [MPa] ISO 178	800	850	850	1,150
Charpy impact strength at 23°C [kJ/m²] ISO 179	NB	11	9.5	4
Heat deflection temperature [°C] ISO 75 at 0.45 MPa	75	85	85	95
Key characteristics	- 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

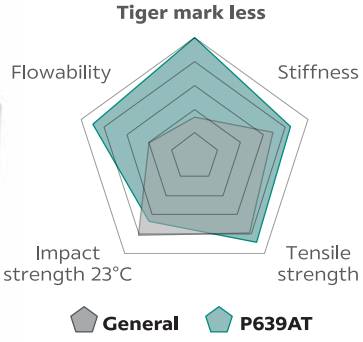
SCGC™ PP:
For Surface Aesthetic Automotive Parts



P747WT	
Characteristics	Low gloss, good stiffness and impact strength balance
Applications	Interior parts



P739ET	
Characteristics	Tiger mark less solution, medium flowability
Applications	Exterior & interior parts



P639AT	
Characteristics	Tiger mark less solution, high flowability
Applications	Exterior & interior parts

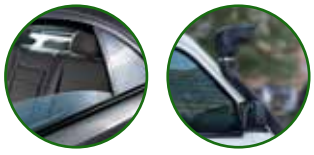
High Crystallinity, Low VOC, and Low Gloss Property

GRADE	P747WT	P739ET	P639AT
Melt flow rate [g/10min] ISO 1133 at 230°C, 2.16 kg	30	55	80
Tensile strength at yield [MPa] ISO 527	24	27	28
Flexural modulus [MPa] ISO 178	1,200	1,270	1,350
Charpy impact strength at 23°C [kJ/m^2] ISO 179	9	6.5	6
Heat deflection temperature [°C] ISO 75 at 0.45 MPa	80	90	90
Key characteristics	- Low gloss - Stiffness and impact strength balance - Medium flowability	- Aesthetics surface - Stiffness and impact strength balance - High flowability	- Aesthetics surface - Stiffness and impact strength balance - High flowability

SCGC™ PP:
For Automotive Parts
PP Block Copolymer Resins

GRADE	P440J	P640J	P686J
Melt flow rate [g/10min] ASTM D1238 @ 230°C, 2.16 kg	5	10	10
Tensile strength at yield [kg/cm²] ASTM D638 @ Crosshead Speed 50 mm/min	270	280	290
Flexural modulus [kg/cm²] ASTM D790	12,500	12,000	13,500
Notched izod impact @ 23°C [J/m] ASTM D256	118	98	120
Heat deflection temperature [°C] ASTM D648 @ 4.6 kg/cm²	100	105	115
Key characteristics	- 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	P140S	P341S
Melt flow rate [g/10min] ASTM D1238 @ 230°C, 2.16 kg	0.7	1.8
Tensile strength at yield [kg/cm²] ASTM D638 @ Crosshead Speed 50 mm/min	275	260
Flexural modulus [kg/cm²] ASTM D790	12,600	12,000
Notched izod impact @ 23°C [J/m] ASTM D256	No break	No break
Heat deflection temperature [°C] ASTM D638	95	100
Key characteristics	- Excellent melt strength - Excellent impact resistance (Down to -20°C) - Stiffness and impact strength balance	- High melt strength - Excellent impact resistance (Down to -20°C) - Stiffness and impact strength balance
Example automotive part		

SCGC™ PP:
For Automotive Parts
PP Block Copolymer Resins

GRADE	P740J	P744J	P840J	P842J
Melt flow rate [g/10min] ASTM D1238 @ 230°C, 2.16 kg	27	30	43	40
Tensile strength at yield [kg/cm²] ASTM D638 @ Crosshead Speed 50 mm/min	290	290	290	295
Flexural modulus [kg/cm²] ASTM D790	12,500	14,500	12,500	15,500
Notched izod impact @ 23°C [J/m] ASTM D256	78	78	70	75
Heat deflection temperature [°C] ASTM D648 @ 4.6 kg/cm²	110	115	110	125
Key characteristics	- 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
Melt flow rate [g/10min] ASTM D1238 @ 230°C, 2.16 kg	2.5	3.5	12	60
Tensile strength at yield [kg/cm²] ASTM D638 @ Crosshead Speed 50 mm/min	350	350	350	360
Flexural modulus [kg/cm²] ASTM D790	15,500	15,500	15,500	16,500
Notched izod impact @ 23°C [J/m] ASTM D256	41	40	34	38
Heat deflection temperature [°C] ASTM D648 @ 4.6 kg/cm²	110	110	110	125
Key characteristics	- Mechanical property balance	- Mechanical property balance	- Mechanical property balance	- Stiffness and impact strength balance - High flowability

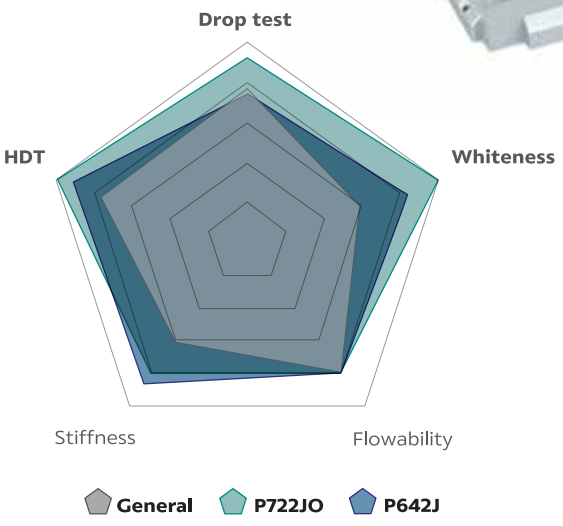
SCGC™ PP:
For Automotive Parts
PP Random Copolymer Resins

GRADE	P750J	P851JO
Melt flow rate [g/10min] ASTM D1238 @ 230°C, 2.16 kg	12	20
Tensile strength at yield [kg/cm²] ASTM D638 @ Crosshead Speed 50 mm/min	300	320
Flexural modulus [kg/cm²] ASTM D790	12,000	12,500
Notched izod impact @ 23°C [J/m] ASTM D256	65	60
Heat deflection temperature [°C] ASTM D648 @ 4.6 kg/cm²	90	100
Key characteristics	- 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	
Characteristics	High dimensional stability and whiteness with UV resistance
Applications	Battery cases and covers

Designed for High Performance Battery Cases and Covers

GRADE	P722JO	P642J
Melt flow rate [g/10min] ASTM D1238 @ 230°C, 2.16 kg	10	10
Tensile strength at yield [kg/cm²] ASTM D638 @ Crosshead Speed 50 mm/min	300	280
Flexural modulus [kg/cm²] ASTM D790	13,000	14,000
Notched izod impact @ 23°C [J/m] ASTM D256	98	98
Heat deflection temperature [°C] ASTM D648 @ 4.6 kg/cm²	120	110
Key characteristics	- High impact strength and stiffness - Good Processability - Good dimensional stability - Good UV resistance	- High stiffness - Contains UV stabilizer and anti-static agent

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Disclaimer:

- The applications specified for reference only.
- It is customer's responsibilities to inspect and test the product for suitability of the customer's own use and purpose.
- The customer is responsible for appropriate, safe, legal use, processing and handling of the product. To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication. We however do not assume any liability whatsoever for the accuracy and completeness of the information contained herein.
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