



**GENERAL
PLASTIC**



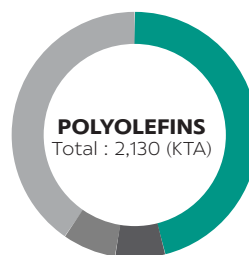
About SCG Chemicals or SCGC

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)

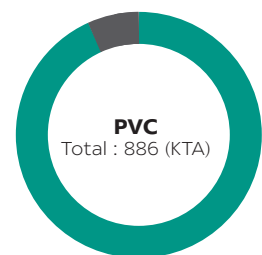


HDPE 980 KTA

LLDPE 140 KTA

LDPE 150 KTA

PP 860 KTA



PVC 850 KTA

PVC Paste 36 KTA

ESG Strategic Directions



“INNOVATION THAT’S REAL”





CONSUMER PACKAGING

SCGC has developed products to be stronger and lighter whilst enabling less material used during production leading to a better environmentally friendly.

GRADE	S411B	P851JO	P945J
MFR (g/10min)	0.22	20.0	65.0
Density (g/cm ³)	0.964	-	-
Tensile strength at Yield (kg/cm ²)	300	320	270
Tensile strength at break MD/TD (kg/cm ²)	330	-	-
Flexural modulus (kg/cm ²)	15,500	12,500	14,000
Notched izod impact at 23oC (J/m)	97	55	65
ESCR (hrs, F5)	120	-	-
Key characteristics	- Up to 15% lighter weight bottle - Excellent combination of stiffness and chemical resistance - Easy processability - Recyclability	- High gloss and clarity - High brightness - Good productivity - Odorless - Food contact safe	- High flowability - High stiffness - Good impact strength - Low stress whitening
Recommended applications	- Cosmetic bottle - Personal and homecare bottle - Food & beverage, milk, bottle	- Microwavable container - Transparent and large food container - Transparent household product - Transparent and soft touch packaging	- Household product - Large size and complicated application - Thin-wall food packaging



INDUSTRIAL PACKAGING

SCGC has developed products allowing industrial packaging to be stronger, lighter, and more durable which not only environmental friendly but also serve customers' need better.

GRADE	S111F	SMX551BU	P686J
MFR (g/10min)	0.04	0.05	10.0
Density (g/cm ³)	0.945	0.946	-
Tensile strength at Yield (kg/cm ²)	-	212	290
Tensile strength at break MD/TD (kg/cm ²)	MD 750, TD 500	382	-
Tear strength MD/TD (g)	MD 30, TD 150	-	-
Dart drop impact (g)	> 300	-	-
Flexural modulus (kg/cm ²)	-	7,200	13,500
Notched izod impact at 23oC (J/m)	-	530	120
ESCR (hrs, F50)	-	> 8,000	-
Key characteristics	- Up to 20% film thickness reduction - Excellent impact strength and toughness - Maintain seal strength as HDPE and LLDPE formulation	- High melt strength - Excellent impact strength at low temperature - Excellent combination of stiffness and impact strength - Excellent chemical resistance - Contained UV-stabilizer	- High impact strength - High stiffness - Good productivity
Recommended applications	- Heavy-duty industrial bags such as chilled poultry and meat bag, industrial liner, construction film etc.	- Bulk liquid container - Hazardous chemical container - Water tank up to 2,000 Liters	- Container - Crate - Electrical appliance part - Pail



FILM APPLICATIONS

SCGC provides various kinds of polyethylene and polypropylene resins, which are produced with world-class technologies and suitable for general purpose film applications. Our HDPE resin has been produced by Mitsui Chemicals Inc. and SCGC own developed Multimodal SMX™ Technology, while LLDPE resin is produced by applying the gas phase process of INEOS Innovene-G and Unipol process by Univation Technology. And PP resin has been developed by Mitsui Chemicals Inc. of Japan.

We ensure our product quality with careful production control and high quality premium additives in order to completely serve customers' requirements worldwide.

HDPE Resin

GRADE	F15	H5604F	S199F
MFR (g/10min)	0.06	0.04	0.04
Density (g/cm ³)	0.952	0.954	0.955
Tensile strength at break MD/TD (kg/cm ²)	MD 900, TD 460	MD 620, TD 310	MD 770, TD 420
Tear strength MD/TD (g)	MD 4, TD 50	MD 3, TD 80	MD 8, TD 40
Dart drop impact (g)	> 180	200	280
Key characteristics	- High productivity - High tensile strength with good dart impact strength - Low gel content - Excellent printing - Good moisture barrier - Food contact applicable	- High tensile strength with good dart impact strength - High stiffness - Low gel content - Good moisture barrier - Food contact applicable	- Excellent dart impact strength - Good tensile strength and stiffness - Good bubble stability - Low gel content - Good moisture barrier - Food contact applicable
Recommended applications	- General purpose film produced by high speed machine and wide lay flat such as liner bag, industrial bag	- General purpose bag such as shopping bag, roll-bag, liner bag, industrial bag, garbage bag, and PE-glove	- General purpose bag such as shopping bag, roll-bag, liner bag, industrial bag, garbage bag, and PE-glove - Thin film thickness below 20 microns

Remark: HDPE film properties obtained from experiment on a pilot line at SCGC with film thickness 12 microns and BUR 5:1
S199F film produced at SCGC lab with film thickness 12 microns and BUR 5:1



FILM APPLICATION

LLDPE RESIN

GRADE	L2009F	L2009FA	L1210F
MFR (g/10min)	1.0	1.0	1.0
Density (g/cm ³)	0.921	0.920	0.921
Tensile strength at break MD/TD (kg/cm ²)	MD 380, TD 350	MD 380, TD 350	MD 380, TD 350
Tear strength MD/TD (g)	MD 150, TD 400	MD 150, TD 400	MD 145, TD 370
Dart drop impact (g)*	130	130	130
Slip anti-block	Yes	No	Yes
Key characteristics	- High productivity - Good optical properties - Ability to blend with HDPE, LDPE - Food contact applicable - Good openability with slip anti-blocking agent	- High productivity - Good optical properties - Ability to blend with HDPE, LDPE - Food contact applicable	- High productivity - Good optical properties - Food contact applicable
Recommended applications	- Chilled and frozen food packaging - Industrial bag - Outer and cover bag	- Chilled and frozen food packaging - Industrial bag - Outer and cover bag	- Agricultural film - Heavy duty bag - Industrial bag

Remark: LLDPE film properties obtained from experiment on a pilot line at SCGC with film thickness 30 microns and BUR 2:1



L1211FA	L1220F	L1221FA	L1810FI	L1811FA
1.0	2.0	2.0	1.0	1.0
0.920	0.920	0.920	0.921	0.920
MD 380, TD 350	MD 220, TD 130	MD 220, TD 130	MD 470, TD 170	MD 500, TD 400
MD 145, TD 370	MD 125, TD 330	MD 125, TD 330	MD 150, TD 400	MD 300, TD 400
150	90	90	130	650
No	Yes	No	Yes	No
- High productivity - Good optical properties - Food contact applicable	- High productivity - High elongation - Good optical properties - Food contact applicable	- High productivity - High elongation - Good optical properties - Food contact applicable - Ability to blend with squeeze tubes and blow molding process	- High productivity - High clarity with water quenched film - Ability to blend with LDPE - Food contact applicable - Good openability with high dosage of slip and anti-blocking agent	- LLDPE metallocene - Good mechanical properties - Good seal strength - Food contact applicable
- Agricultural film - Heavy duty bag - Industrial bag	- General purpose bag - Merchandise bag - Printed bag - Small bag	- General purpose bag - Lamination film - Stretch cling film	- Chilled and frozen food packaging - Fruit and vegetable bag - Industrial bag - Water quenched blown film	- Food packaging - Heavy duty bag - Lamination film - Multi-layers film packaging



FILM APPLICATION

PP HOMOPOLYMER RESIN

GRADE	P601F	P602F
MFR (g/10min)	10.0	10.0
Tensile strength at break (%)	MD 300, TD 100	MD 270, TD 100
Elongation at break (%)	MD 500, TD 100	MD 450, TD 100
Tensile modulus, 2% secant (kg/cm ²)	MD: 5000, TD: 4800	MD: 5500, TD: 5300
Slip Anti-block	Yes	No
Key characteristic	- High productivity - Good optical properties - Excellent openability - Food contact safe - High slip and Anti-block content	- High productivity - Excellent optical properties - Ability to blend with P601F for superior film clarity - Food contact applicable
Recommended applications	- Water quenched blown film for general purpose film and food packaging	- Water quenched blown film for thick packaging such as food packaging and display bag

Remark: PP film properties obtained from experiment on a pilot line at SCGC with film thickness 35 microns and cooling water temperature at 25 °C



INJECTION MOLDING APPLICATIONS

SCGC provides a diverse range of polyethylene and polypropylene resins to meet the different injection applications.

Our general polypropylene resins come in various kinds, including PP Block Copolymer, PP Homopolymer, and PP Random Polymer resins, in order to meet the industrial trends, such as the demand for high impact strength, high stiffness, and good clarity.

HDPE Resin

GRADE	H5814J	H5818J	H6105JU	H6308JU
MFR (g/10min)	14.0	18.0	5.0	8.2
Density (g/cm ³)	0.958	0.959	0.964	0.963
Tensile strength at Yield (kg/cm ²)	280	290	250	310
Flexural modulus (kg/cm ²)	12,500	13,000	15,500	13,500
Notched izod Impact at 23°C (J/m)	29	27	32	3.5
Key characteristics	- Good processability - Good impact resistance - Food contact applicable	- Good processability - Good impact resistance - Food contact applicable	- Good stiffness and impact resistance - Good processability - UV resistance	- Good stiffness and impact resistance - UV resistance
Recommended applications	- General injection part - Household product - Office article - Bottle cap and closure - Toy	- General injection part - Household product - Bottle cap and closure - Toy	- Large container and garbage bin - Fruit basket - Pallet and crate - Industrial part - Outdoor application	- Beverage bottle crate - Pallet - Industrial part for outdoor application



INJECTION MOLDING APPLICATION LLDPE RESIN

GRADE	L2420J	L2650J
MFR (g/10min)	20.0	50.0
Density (g/cm ³)	0.924	0.926
Tensile strength at yield (kg/cm ²)	130	180
Flexural modulus (kg/cm ²)	6,600	6,100
Notched izod Impact at 23°C (J/m)	150	40
Key characteristics	- Excellent impact strength - Good environmental stress crack resistance - Good processability	- Excellent impact strength - Good environmental stress crack resistance - High flowability
Recommended applications	- General injection parts - Household product - Lid and bottle closure - Masterbatch carrier	- General injection part - Household product - Lid and bottle closure - Masterbatch carrier



INJECTION MOLDING APPLICATION

PP HOMOPOLYMER RESIN

GRADE	P403J	P700J	P701J	P702J
MFR (g/10min)	3.5	12.0	12.0	12.0
Tensile strength at break MD/TD (kg/cm ²)	320	320	350	420
Flexural modulus (kg/cm ²)	13,500	14,500	15,500	17,000
Notched izod Impact at 23°C (J/m)	41	37	34	34
Key characteristics	- Good impact resistance - Odorless - Food contact applicable	- Good stiffness - High productivity - Odorless - Food contact applicable	- Excellent stiffness - High productivity - Odorless - Food contact applicable	- Excellent stiffness - Good clarity and gloss - High productivity - Odorless - Food contact safe
Recommended applications	- Food container - Fruit basket - Furniture - Household product - Infant product - Office accessory	- Food container - Fruit basket - Household product - Infant product - Office accessory - Toy	- Food container - Fruit basket - Household product - Infant product - Office accessory - Toy	- Food container - Household product - Toy



INJECTION MOLDING APPLICATION

PP BLOCK COPOLYMER RESIN

GRADE	P440J	P441JU	P483JU	P640J	P642J
MFR (g/10min)	5.0	5.0	5.0	10.0	10.0
Tensile strenght at yield (kg/cm ²)	270	270	300	280	280
Flexural modulus (kg/cm ²)	12,500	12,500	16,500	12,000	14,000
Notched izod Impact at 23°C (J/m)	118	118	108	98	98
Key characteristics	- High impact strength - Good stiffness - Food contact applicable				
	- High impact strength - Good stiffness - Good UV resistance - Contain anti-static agent				
	- High impact strength - Excellent stiffness - Good processability - Good dimensional stability - High heat resistance - Good UV resistance - Contained anti-static agent				
	- High impact strength - Good stiffness - Good processability - Food contact applicable				
	- High impact strength - High stiffness - Good flowability - Mechanical property balance - Contain UV stabilizer and anti-static agent				
Recommended applications	- Automotive part - Container - Crate - Electrical appliance part - Furniture - Industrial application - Pail	- Automotive part - Crate - Electrical appliance part - Pail - Industrial application - Outdoor application	- Automotive part - Electrical appliance part - Outdoor application - Returnable packaging such as pallet, crate, and container	- Automotive part - Electrical appliance part - Furniture - Industrial application - Toy	- Automotive part - Electrical appliance part - Furniture - Industrial application



P722JO	P740J	P744J	P840J	P841J	P842J
10.0	27.0	30.0	43.0	40.0	40.0
300	290	290	290	260	295
13,000	12,500	14,500	12,500	12,000	14,500
98	78	78	70	70	74
- High impact strength - High stiffness - Dimensional stability - Good processability - Good UV resistance	- Good impact strength - Good stiffness - Good processability - Food contact applicable	- Good impact strength - High stiffness - High processability	- Good Impact strength - Good stiffness - Good processability - Food contact applicable	- Good impact strength - Good stiffness - Good processability - Good UV resistance	- Good impact strength - High stiffness - Dimensional stability - Food contact safe
- Automotive part - Battery case - Industrial application	- Automotive part - Complicated industrial part - Electrical appliance part	- Complicated industrial part - Home appliance part - Household products - Washing machine tub	- Automotive part - Complicated industrial part - Electrical appliance part	- Electrical appliance parts such as washing machine tub, base, panel, etc. - Industrial application	- Electrical appliance parts such as refrigerator part and washing machine tub, base, panel, etc. - Industrial application





INJECTION MOLDING APPLICATION

PP RANDOM COPOLYMER RESIN

GRADE	P750J
MFR (g/10min)	12.0
Tensile strength at yield (kg/cm ²)	300
Flexural modulus (kg/cm ²)	12,000
Notched izod impact at 23°C (J/m)	65
Key characteristics	- High gloss and clarity - Good impact resistance - Odorless - Food contact applicable
Recommended applications	- Transparent food container - Transparent household product



BLOW MOLDING APPLICATION

SCGC provides a various range of HDPE resin which manufactured by utilizing the world-class technology from Mitsui Chemicals, Inc. of Japan and own developed Multimodal SMX™ Technology.

According to our excellent HDPE process technology, we offer a good processability and balance mechanical properties with enhanced ESCR property for to serve variety of small blow applications.

GRADE	H5840B	H6140B
MFR (g/10min)	0.40	0.30
Density (g/cm ³)	0.955	0.960
Flexural modulus (kg/cm ²)	13,500	14,500
Notched izod impact at 23°C (J/m)	98	98
ESCR (hrs, F50)	300	100
Key characteristics	- Excellent environmental stress crack resistance - Good surface appearance - Good processability - Good printability - Recyclability	- Good gloss surface - Good impact strength, while maintaining chemical resistance - Recyclability
Recommended applications	- Brake fluid bottle - Chemical bottle - Lubricant bottle - Homecare bottle	- Food and beverage bottles such as milk, drinking water, and fruit juice bottle

Remark: Small blow application means container that able to contain capacity not over 20 Litres



H6430BM

0.40

0.964

16,000

245

24

- Excellent stiffness
- Odorless
- Recyclability

- Food and beverage bottle such as milk, drinking water, and juice bottle

H6670B

0.70

0.965

15,000

147

24

- Excellent stiffness
- Good processability
- High productivity
- Odorless
- Recyclability

- Food and beverage bottle produced by high-speed machine such as milk, drinking water, and juice bottle

S495B

0.23

0.958

14,000

93

300

- Excellent Environmental Stress Crack Resistance (ESCR)
- Excellent combination between stiffness and chemical resistance
- Good processability
- Recyclability

- Brake fluid bottle
- Chemical bottle
- Lubricant bottle
- Homecare bottle



MONOFILAMENT AND FLAT YARN APPLICATION

SCGC offers polyethylene and polypropylene resins with excellent processability, the ideal for monofilament and flat yarn applications that require high mechanical properties such as woven sack, tarpaulin, rope, net, straw, and sheet.

GRADE	H5480S
MFR (g/10min)	0.8
Density (g/cm ³)	0.952
Flexural modulus (kg/cm ²)	10,000
Notched izod impact at 23°C (J/m)	167
ESCR (hrs, F50)	30
Key characteristics	- Good processability - High tenacity - Good product appearance
Recommended applications	- Agriculture net - Fishing net - Rope - Tarpulin - Sun shading - Woven sack



MONOFILAMENT AND FLAT YARN APPLICATION PP HOMOPOLYMER RESIN

GRADE	P400S	P401S
MFR (g/10min)	3.5	2.5
Tensile strength at yield (kg/cm ²)	350	350
Flexural modulus (kg/cm ²)	15,500	15,500
Notched izod impact at 23°C (J/m)	40	41
Key characteristics	- Good processability - High productivity - Good mechanical properties - Food contact applicable	- Excellent mechanical properties - Good processability - Food contact applicable
Recommended applications	- Flexible Intermediate Bulk Container (FIBC) - Rope & twine - Sheet - Stap - Straw - Woven sack	- Rope - Sheet and thermoforming - Strap band - Straw - Woven sack such as Flexible Intermediate Bulk Container (FIBC), jumbo bag, and industrial woven sack





MONOFILAMENT AND FLAT YARN APPLICATION PP FOR COATING APPLICATION

GRADE	P838C
MFR (g/10min)	28.0
Tensile strength at yield (kg/cm ²)	280
Flexural modulus (kg/cm ²)	11,000
Vicat temperature (°C)	140
Key characteristics	- Good processability - Good adhesion on substrate - Balanced stiffness and impact strength
Recommended applications	- Tarpaulin coating - PP woven bag coating - PP woven bag lamination with other substrate such as BOPP film, paper, metalized film

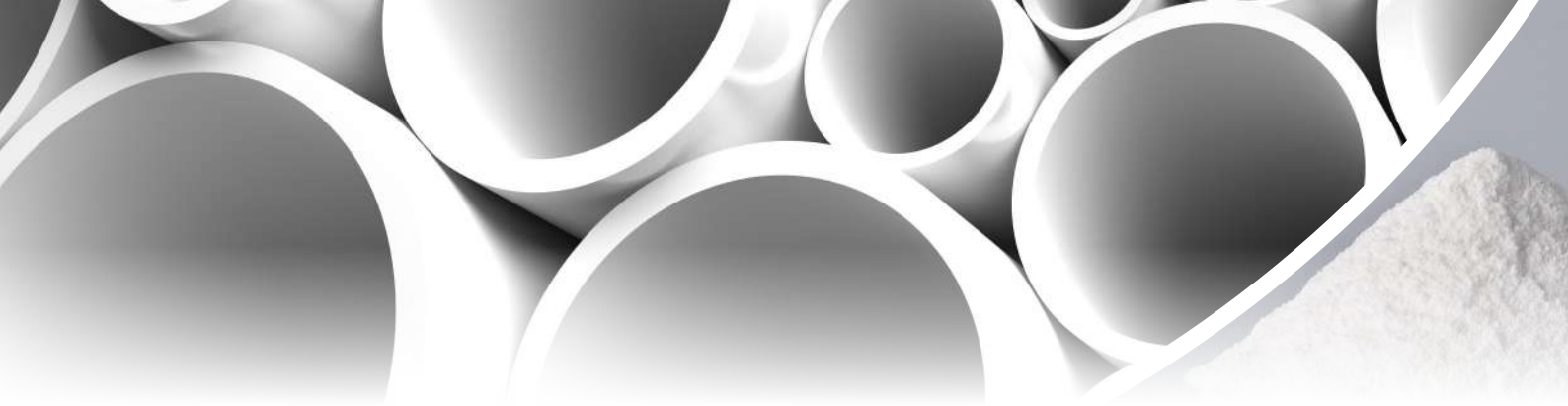


GENRAL PVC RESIN

Our PVC resins are produced by suspension polymerization process, while powder and free-flowing resins providing powder and free flow resins that can contain quality of additives with standard mixing techniques. These resins are suitable for wide range of PVC applications.

GRADE	SF580	SG580	SG610
K value (-)	58.1	58.2	61.0
Apparent bulk density (g/ml)	0.57	0.57	0.58
Volatile matter (%)	0.1	0.1	0.1
Sieve analysis, retained at 250 microns (%)	0.1	0.1	0.1
Sieve analysis, retained at 75 microns (%)	94.9	95.1	94.8
Impurities and foreign matter (Points/100g)	10	3	4
Residual vinyl chloride monomers (ppm)	0.4	0.3	0.3
Volume resistivity (Ohm-cm)	-	-	1.0 x 10 ¹³
Key characteristics	- Excellent fusion properties - Good thermal stability	- Excellent fusion properties - Good thermal stability - Good initial coloration	- Good thermal stability - Good initial coloration
Recommended applications	- Adhesive - Fitting - Rigid injection product	- Construction profile - Credit card - Furniture trimming - Rigid sheet packaging - Stationery	- Construction profile - Credit card - Electric plug - Floor cover - Floor tile - Furniture trimming - Rigid sheet packaging - Stationery - Stickers and decorative sheet

Remark: Typical values only



SG660	SP660	SG710
66.0	65.5	71.3
0.55	0.56	0.49
0.1	0.1	0.1
0.1	0.3	0.3
97.9	97.8	97.9
5	8	5
0.3	0.2	0.1
3.8×10^{13}	-	4.8×10^{13}
- Good thermal stability - Good initial coloration - Good electrical resistance	- High bulk density - Good flow ability - Good thermal stability	- Good thermal stability - Good initial coloration - Good electrical resistance - Good mechanical performance
- Electrical wire & cable - Flexible sheet packaging - Floor cover - Furniture trimming - Hose - PVC curtain - Shoes	- PVC Pipe - Rigid extrusion part	- Artificial leathet - Automotive part - Electrical tape - Electrical wire & cable - Flexible sheet packaging - Gasket - Hose - Inflatable toy - Wire harnesses



SCG Chemicals PLC.

1 Siam Cement Road, Bangsue, Bangkok 10800, Thailand

Email: general_plastics@scg.com

www.scgchemicals.com



Scan to Email Us



**Scan to Visit
Our Website**



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.
- We make no warranties which extend beyond the description herein. Nothing herein shall constitute any implied warranty of merchantability or fitness for a particular purpose.
- No liability can be accepted in respect for the use of the product in conjunction with other materials. The information contained herein relates exclusively to the product when it is not used in conjunction with any third party's materials.