



**FOOD &
BEVERAGE**



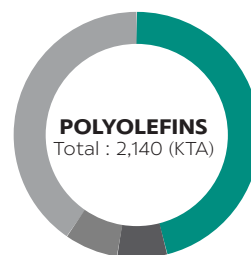
About SCG Chemicals or SCGC

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 2025)

TOTAL CAPACITY : 3,030 KTA (PE / PP / PVC)

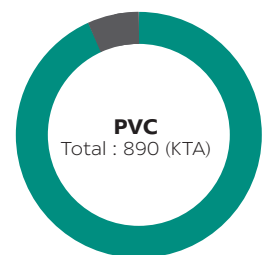


HDPE 980 KTA

LLDPE 140 KTA

LDPE 160 KTA

PP 860 KTA



PVC 850 KTA

PVC Paste 40 KTA

ESG Strategic Directions



“INNOVATION THAT’S REAL”





FOOD & BEVERAGE

SCGC believes in being a part of environmental conservation efforts by creating sustainable packaging.

With population growth on the rise, the issue of waste, especially from food and beverage packaging, has gained attention from both people and companies who wish to take better care of the environment.

SCGC believes in being a part of environmental conservation efforts by creating sustainable packaging. Thus, SCGC has developed its signature SMX™ Technology, an innovative manufacturing process for high-density polyethylene (HDPE) resins that are recyclable, stronger, lighter, and uses less plastic. SCGC has also established i2P Center, an innovation and application development hub where partners can explore novel solutions for HDPE, LDPE, and PP applications that give superior quality and environmentally friendly.

To further reduce environmental impact, SCGC has been working on developing mono-material solutions for fully recyclable packaging. With its longstanding expertise in the petrochemical industry and wide range of networks with research laboratories, SCGC believes that such a solution will grow the near future. For instance, SCGC is currently collaborating with Norner, a research laboratory, as well as other machine makers and brand owners worldwide for these initiatives. With mono-material packaging in sight, SCGC is confident that it can create a more circular economy for everyone in the coming years.

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





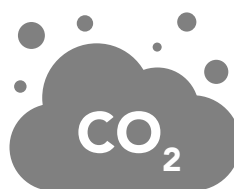
SCGC™ HDPE

For Carbonated Soft Drink and Sparkling Water Caps & Closures

SX002J and SX002JA for Sustainable Food & Beverage Packaging



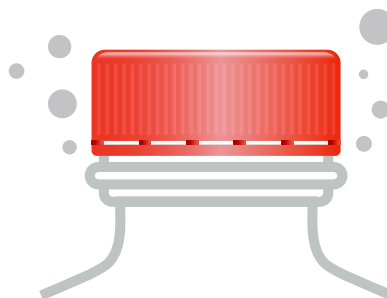
Up to 20%
less plastic use



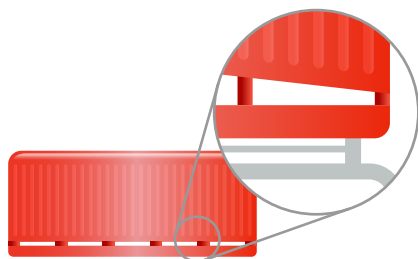
Reduces at least 224 kg of CO₂ emissions
for every ton of plastic consumed



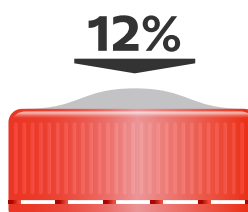
Superior stress cracking resistance



Better gas retention (10%)



Higher bridge strength (15%)



Less doming (12%)

Reference resin: SCGC Bi-modal HDPE for Carbonated Soft Drink and Sparkling Water Caps & Closures



SCGC™ HDPE

For Carbonated Soft Drink and Sparkling Water Caps & Closures

GRADE	SX002J	SX002JA
Recommended applications	- Carbonated soft drink and sparkling water for Lightweight closure - Hot fill and aseptic beverage closure	
Recommended processes	- Injection molding - Continuous compression molding	
Melt flow rate (MFR) at 190°C, 2.16kg (g/10min) ISO 1133	0.55	
Density (g/cm³) ISO 1183-2	0.955	
Tensile modulus (MPa) ISO 527 (1B, Speed 1 mm/min)	1,000	
Charpy impact strength (kJ/m²) ISO 179 @ 23°C	8	
Environmental stress cracking resistance (ESCR), F50, 10% Igepal (hr) ASTM D1693	>1,000	
Slip agents	✓	-
Key characteristics	- Superior Environmental Stress Cracking Resistance (ESCR) - Excellent balance of stiffness and toughness - Good organoleptic property	
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011	



SCGC™ HDPE: EXCELLENT STRESS CRACKING RESISTANCE For Carbonated Soft Drink and Sparkling Water Caps & Closures

GRADE	H567J	H567JA
Recommended applications	- Carbonated soft drink and sparkling water - Hot fill and aseptic beverage closure	
Recommended processes	- Injection molding - Continuous compression molding	
Melt flow rate (MFR) at 190°C, 2.16kg (g/10min) ISO 1133	1	
Density (g/cm³) ISO 1183-2	0.952	
Tensile modulus (MPa) ISO 527 (1B, Speed 1 mm/min)	1,010	
Charpy impact strength (kJ/m²) ISO 179 @ 23°C	6	
Environmental stress cracking resistance (ESCR), F50, 10% Igepal (hr) ASTM D1693	> 600	
Slip agents	✓	-
Key characteristics	- Excellent Environmental Stress Cracking Resistance (ESCR) - Excellent flowability - Good mechanical and organoleptic properties	
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011	



SCGC™ HDPE: ORGANOLEPTIC For Still & Mineral Water and Hot-Filled Beverage Caps & Closures

GRADE	H355JA	H455JA
Recommended applications	- Still & mineral water closure - Hot-filled beverage closure - Aseptic beverage closure	
Recommended processes	- Injection molding - Continuous compression molding	
Melt flow rate (MFR) at 190°C, 2.16kg (g/10min) ASTM D1238	7.5	4.5
Density (g/cm³) ASTM D1505	0.961	0.958
Flexural modulus (kg/cm²) ASTM D790	13,500	12,500
Notched Izod Impact at 23°C (J/m) ASTM D256	33	39
Environmental stress cracking resistance (ESCR), F50, 10% Igepal (hr) ASTM D1693	6	7
Slip agents	-	-
Key characteristics	- Excellent processability - High stiffness - Excellent organoleptic property	- Good processability - High stiffness - Excellent organoleptic property
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011	



SCGC™ PP: BLOCK COPOLYMER

For Carbonated Soft Drink and Hot-Filled Beverage Caps & Closures

GRADE	P443J
Recommended applications	- Carbonated soft drink closure - Hot-filled beverage closure
Recommended processes	- Injection molding - Continuous compression molding
Melt flow rate (MFR) at 230°C, 2.16kg (g/10min) ASTM D1238	6
Flexural modulus (kg/cm ²) ASTM D790	15,000
Notched Izod Impact at 23°C (J/m) ASTM D256	110
Tensile strength at yield (kg/cm ²) ASTM D638	290
HDT (°C) ASTM D648	120
Slip agents	✓
Key characteristics	- Excellent processability - High stiffness - High heat resistance
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011



SCGC™ PP: HOMOPOLYMER

For Thin Wall Injection Molding Food Packaging

GRADE	P904J	P905J
Recommended applications	- Drinking cup - Food container - Household product	
Melt flow rate (MFR) at 230°C, 2.16kg (g/10min) ASTM D1238	75	65
Flexural modulus (kg/cm ²) ASTM D790	16,500	17,000
Notched Izod Impact at 23°C (J/m) ASTM D256	38	32
HDT at 4.6 kg/cm² (°C) ASTM D648	121	100
Haze 1 mm (%) ASTM D1003	43	20
Key characteristics	- High flowability - High Chality - Good stiffness and toughness balance - Microwavable or hot fillable	
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011	



SCGC™ PP: HOMOPOLYMER

For Thermoformed Food Packaging

GRADE	P304S	P303S	P105S
Recommended applications	- Food tray - Food container - Disposal drink cup		
Melt flow rate (MFR) at 230°C, 2.16kg (g/10min) ASTM D1238	2.1	2.3	0.5
Flexural modulus (kg/cm ²) ASTM D790	13,500	19,000	18,000
Notched Izod Impact at 23°C (J/m) ASTM D256	6	59	120
HDT at 4.6 kg/cm² (°C) ASTM D648	110	128	110
Key characteristics	- Good stiffness and toughness - Good clarity - Microwavable or hot fillable	- High stiffness - High clarity - Microwavable or hot fillable	- High melt strength - High stiffness - Low sagging - Specially designed for vacuum thermoforming
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011		



SCGC™ PP: HETEROPHASIC POLYPROPYLENE For Thermoformed Frozen to Microwavable Food Packaging

GRADE	P348S	P140S
Recommended applications	- Food tray - Food container	
Melt flow rate (MFR) at 230°C, 2.16kg (g/10min) ASTM D1238	2.8	0.7
Density (g/cm³) ASTM D1505	0.963	0.910
Flexural modulus (kg/cm²) ASTM D790	20,500	12,600
Notched Izod Impact at 23°C (J/m) ASTM D256	34	No break
HDT at 4.6 kg/cm² (°C) ASTM D648	130	95
Key characteristics	- Excellent thermal stability and high stiffness - High impact strength at low temperature - Microwavable or hot fillable - Superior impact strength - Balance stiffness - Dimension stability - Specially designed for vacuum thermoforming	
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Commission Regulation (EU) no. 10/2011	



SCGC™ LDPE

For Extrusion Coating and Lamination

GRADE	D477C	D777C	D388C
Recommended applications	- Sachet - Pouch - Aseptic box - Woven - Paper & tarpaulin		
Melt flow rate (MFR) at 190°C, 2.16kg (g/10min) ASTM D1238	4	7	8
Density (g/cm³) ASTM D1505	0.924	0.920	0.919
Melting temperature (°C) ASTM D3418	112	107	107
Key characteristics	- Good neck-in performance - High stiffness - High scratch resistance - Good processability, thickness control, and edge stability	- Good neck-in performance - Good processability, thickness control, and edge stability	- Excellent draw ability - Suitable for high speed machine - Good processability and thickness control with low coating weight
International compliance standards	- U.S FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Regulation (EC) 2023/2006 (GMP) - Packaging and Packaging Waste Directive 94/62/EC - Consult the regulations for complete details		

Remark: Coating properties obtained from pilot coating line, Melt temperature 295°C, line speed 100 m/min



SCGC™ HDPE

For Co-Extrude Blown Film, Machine Direction Oriented Film, Bi-axial Oriented Film, Cast Film, Extrusion Coating, and Lamination

GRADE	H619F	H377C	S197F
Recommended process	- Co-extrusion blown film - Machine directional oriented film	- Cast film - Extrusion coating and lamination	- Bi-axial oriented film
Recommended applications	- General and industrial packaging - Diaper back sheet - Stand up pouch - Laminated film and tube - Pressure sensitive adhesive label - Mono-material packaging	- Non-breathable film - Breathable film - Laminated film - Laminated tube - Aseptic carton - Released liner - Paper coating	- BOPE film - Metalized film - Mono-material packaging
Melt flow rate (MFR) at 190°C, 2.16kg (g/10min) ASTM D1238	0.7	7.5	0.7
Density (g/cm³) ASTM D1505	0.962	0.961	0.954
Tensile strength at break (MPa) ASTM D882	MD 42, TD 35	MD 37, TD 28	-
Elongation at break (%) ASTM D882	MD 730, TD 4	MD 859, TD 3	-
2% secant modulus (MPa) ASTM D882	MD 915, TD1010	MD 706, TD 855	-
Elmendorf tear strength (g) ASTM D1922	MD 8, TD 261	MD 8, TD 64	-
Key characteristics	- High film stiffness - High temperature resistance - Excellent compatibility with LLDPE and LDPE	- High stiffness - Easy tearing in MD - Excellent temperature and scratch resistance	- Good stretchability - Excellent dimensional stability
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Regulation (EC) 2023/2006 (GMP) - Packaging and Packaging Waste Directive 94/62/EC - Consult the regulations for complete details	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Regulation (EC) 2023/2006 (GMP) - Packaging and Packaging Waste Directive 94/62/EC	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Regulation (EC) 2023/2006 (GMP) - Packaging and Packaging Waste Directive 94/62/EC - RoHS: Directive 2011/65/EU - Consult the regulations for complete details

Remark: Film properties obtained from pilot line at SCGC, 25 micron, Melt temperature 220°C



SCGC™ PP: HOMOPOLYMER & COPOLYMER For Cast Film and Biaxial Oriented Film

GRADE	P607F	P350F	P405F	P409F
Recommended process	- Cast film	- Cast film	- Bi-axial oriented film	- Bi-axial oriented film
Recommended applications	- Laminated film - Metalized film	- Retort packaging	- BOPP film - Metalized film	- BOPP for high heat resistance - Metalized film
Melt flow rate (MFR) at 230°C, 2.16kg (g/10min) ASTM D1238	7.0	3.2	3.0	3.0
Density (g/cm³) ASTM D1505	0.910	0.900	0.900	0.900
Flexural modulus (MPa) ASTM D790A	1608	800	1500	1700
Notched izod impact strength at 23 °C (J/M) ASTM D256A	-	-	47	300
Haze (%) ASTM D1003	9 (Film thickness 25 µm)	11 (Film thickness 70 µm)	1.1 (Film thickness 20 µm)	3.5 (Film thickness 18 µm)
Key characteristics	- High film stiffness - Good clarity - Good processability	- Excellent seal properties - Excellent clarity - Good stress-whitening resistance	- Good stretchability - High clarity - Good dimensional stability	- Good stretchability - Good clarity - Excellent dimensional stability
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Packaging and Packaging Waste Directive 94/62/EC - Consult the regulations for complete details	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Regulation (EC) - Consult the regulations for complete details	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Consult the regulations for complete details

Remark: Film properties obtained from pilot line at SCGC, 25 micron (P607F) and 70 micron (P350F), Melt temperature 220°C



SCGC™ PP: HETEROPHASIC POLYPROPYLENE For Extrusion Coating and Lamination

GRADE	P790C
Recommended applications	- Instant noodle - Snack - Candy
Melt flow rate (MFR) at 230°C, 2.16kg (g/10min) ASTM D1238	20
Density (g/cm³) ASTM D1505	0.900
Tensile strength at yield (MPa) ASTM D882	MD 33.6, TD 23.3
Elongation at yield (%) ASTM D882	MD 760, TD 670
Melting temperature (°C) ASTM D3418	140
Key characteristics	- Excellent processing - Good compatible with color masterbatch - Good seal initial temperature - Good adhesion on BOPP film
International compliance standards	- U.S. FDA 21 CFR 177.1520 - Regulation (EU) No.10/2011 - Consult the regulations for complete details



SCG Chemicals PLC.

1 Siam Cement Road, Bangsue, Bangkok 10800, Thailand

Email: foodbev_pkg@scg.com

www.scgchemicals.com



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