

POST-CONSUMER RECYCLED RESIN

MECHANICAL RECYCLING & ADVANCED RECYCLING



CONNECTING THE WORLD THROUGH RECYCLING SOLUTIONS

CHEMICALS BUSINESS FOR SUSTAINABILITY

SCGC is determined to achieve leadership in integrated chemicals business for sustainability and committed to conducting business in line with Environmental, Social, and Governance **(ESG)** for achieving Sustainable Development Goals (SDGs) with SCGC sustainable development strategies.



ESG Strategic Directions

Towards our vision for sustainable future, SCGC has integrated the concept of circular economy into our core strategies to provide green solutions in polymer business, resulting in SCGC GREEN POLYMER[™] with **2 major solutions: Recycle and Renewable.**

SCGC Green Solutions to Enable Circularity





RECYCLE Mechanical & Advanced Recycling



RENEWABLE Bioplastics

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

Our Goals



Remarks: *Green House Gas reduction calculation guideline by Thailand Green Gas Management Organization **0,0095 MT CO2 absorption/tree/year

PARTNERSHIP WITH GLOBAL NETWORK

Sirplaste



Portugal

Sirplaste is a pioneer plastic recycler in Portugal. With nearly 50 years of experience, Sirplaste has become a leading innovator in the plastic recycling industry, committed to sustainable solutions and the circular economy.

With a focus on high-quality recycled materials, Sirplaste utilizes advanced technologies to transform plastic waste into valuable recycled granules for various applications with an annual production capacity of **54,000 tons**.

Material availability: rHDPE, rLDPE, rPP

TO STRENGTHEN THE MECHANICAL RECYCLING and ADVANCED RECYCLING SOLUTIONS





Thailand

SCGC is a leading integrated chemical player in ASEAN with strategic bases in Vietnam, Indonesia, and Thailand, offering 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.

With sustainability at the core of our business, we can turn waste into high-quality PCR by Mechanical Recycling with **9,000 tons** to recover the value of used plastics and sustainably minimize waste under circular economy principles.

Material availability: rHDPE, rPP, rLLDPE, rLDPE







Thailand

Teamplas Co., Ltd. is a leading plastic recycler in Thailand, producing premium-grade recycled pellets that meet international standards. Using specially developed methods, Teamplas upgrades recycled waste to meet the stringent demands of industries such as automotive, electronics, and furniture.

With a commitment to customer satisfaction and sustainability, and an annual production capacity of **60,000 tons**, the company supports the circular economy with high-quality, eco-friendly solutions.

Material availability: rHDPE, rPP, rLLDPE, rLDPE, rABS, rHIPS, rPA, rPVC





High Density Polyethylene



Crada		Recommended	Melt Flow Rate at 190°C/2.16kg	Density	Flexural Modulus	Tensile Strength at Break	Elongation at Break	Notched Izod Impact	ESCR F50 (Igepal 10%)
Grade	Color	Application	ASTM D1238	ASTM D792	ASTM D790	ASTM D638	ASTM D638	ASTM D256@23°C	ASTM D638
			g/10 min	g/cm³	MPa	MPa	%	J/m	Hrs
PCRH01BN	Natural	Bottle, Gallon, Film	0.4	0.96	1,100	20	900	90	24
PCDH01BN	Natural	Bottle, Gallon, Film	0.4	0.96	1,100	20	900	90	24
PCDH02BW	White	Bottle, Gallon, Film	0.4	0.98	1,000	20	800	60	24
PCRH03BB	Black	Bottle, Gallon, Film	0.5	0.97	1,000	15	500	50	24



High Density Polyethylene

Sirplaste

		Color Recommended		Density	Flexural Modulus	Tensile Strength at Break	Elongation at Break	Notched Izod Impact	ESCR F50 (Igepal 10%)
Grade	Color	Application	ISO 1133-1	ISO 1183-1	ISO 178	ISO 527-2	ISO 527-2	ISO 180/A @23°C	ASTM D1693
			g/10 min	g/cm ³	MPa	MPa	%	kJ/m²	Hrs
SIRPRIME B 00 022 NA AX	Natural	Bottle	0.2 - 0.5	0.94 - 0.96	700	12	150	25	72
SIRPRIME B 00 015 WH AX	White	Bottle	0.2 - 0.5	0.95 - 0.97	700	12	250	25	72
SIRPAD B 00 017 BK	Black	Bottle, Pipe	0.5 - 0.9	0.94 - 0.96	730	11	350	11	24
SIRPAD B 00 017	Grey, Blue, Green	Bottle, Pipe	0.5 - 0.9	0.94 - 0.96	730	10	350	12	24
SIRPAD BP 00 017 BK	Black	Pipe	0.5 - 0.9	0.94 - 0.96	700	12	220	18	24
SIRBLEND C 00 160 IM	Black, Grey	Large Container	5.0 - 8.0	0.90 - 0.95	700	15	120	7	24



Portugal

Low Density Polyethylene Linear Low Density Polyethylene

📄 Thailand

		Recommended	Melt Flow Rate at 190°C/2.16kg	Density	Tensile Strength at Break (MD/TD)	Elongation at Break (MD/TD)	Dart Drop Impact Strength (g)
Grade	Color	Application	ASTM D1238	ASTM D792	ASTM D882	ASTM D882	ASTM D1709
			g/10 min	g/cm³	MPa	%	g
PCDD01FN	Natural	Film	0.2	0.917	24/22	136/222	52
PCDL01FN	Natural	Film	1.8	0.92	15/18	563/667	145

Low Density Polyethylene

Sirplaste

Portugal

Grade	Recommended		Melt Flow Rate at 190°C/2.16kg	Density	Tensile Strength At break (MD/TD)	Elongation At break (MD/TD)
Grade	Color	Application	ISO 1133-1	ISO 1183-1	ISO 527-3	ISO 527-3
			g/10 min	g/cm³	MPa	%
SIRFILM PA 00 008 NA MA 2	Natural	Film	0.3 - 0.7	0.92 - 0.94	20/18	300/500
SIRFILM 00 008	Black, Grey, Blue, Green, Yellow, White	Film	0.6 - 1.2	0.93 - 0.95	18/15	350/500
SIRMIX 00 008	Black	Pipe, Film, Profile	0.6 - 1.1	0.93 - 0.95	15/12	300/500
SIRTUB 00 008 BK	Black	Pipe, Profile	0.5 - 1.0	0.93 - 0.95	15/12	300/500
SIRFORCE 00 008	Black, Grey	Profile	0.5 - 1.0	0.93 - 0.95	15/12	300/500

Polypropylene



Grade		Recommended	Melt Flow Rate at 230°C/2.16kg	Density	Flexural Modulus	Tensile Strength at Break	Elongation at Break	Notched Izod Impact
	Color	Application	ASTM D1238	ASTM D792	ASTM D790	ASTM D638	ASTM D638	ASTM D256@23°C
			g/10 min	g/cm ³	MPa	MPa	%	J/m
PCDP01JN	Natural	Cap, Jar, Household	6	0.910	1,300	20	150	50
PCDP02JN	Natural White	Cap, Pail, Jar, Household	12	0.910	1,000	20	200	110
PCRP03JB	Black	Pail, Household	12	0.910	1,000	24	50	115
PCRP04SN	Natural	Woven bag	4	0.910	1,100	15	20	95
PCDP05JN	Natural Grey	Household	25	0.900	1,100	15	20	95

Sirplaste

Portugal

Grade	Color	Recommended Application	Melt Flow Rate at 230°C/2.16kg ISO 1133-1	Density ISO 1183-1	Flexural Modulus ISO 178	Tensile Strength at Break ISO 527-2	Elongation at Break ISO 527-2	Notched Izod Impact ISO 180/A @23°C
			g/10 min	g/cm ³	MPa	MPa	%	K
SIRPROP CP 00 200 BK IM	Black	Injection goods	15 - 20	0.915 - 0.935	1,000	18	150	5
SIRPROP CP 00 020	White	Film, Profile	2 - 7	0.890 - 0.910	600	17	400	9

High Density Polyethylene

CHEMICAL CO., LTD.



Melt Flow Tensile Notched Flexural Elongation Rate at Density Strength Izod Modulus at Break 190°C/2.16kg at Yield Impact Recommended Grade Color Application ASTM ASTM ASTM ASTM ASTM ASTM D1238 D792 D638 D638 D256@23°C D790 g/10 min g/cm³ MPa MPa Personal care, HDC01-153SK 0.95 Natural 0.4 1,100 28 60 700 Homecare Personal care, HDC01-178SK Natural - B 0.95 0.4 1,200 30 60 650 Homecare Personal care, HDC02-1139SK White 0.5 0.96 1,100 25 300 60 Homecare Household product, HDC16-152 Black 0.96 1,100 300 0.5 27 80 Lube Gallon

Linear Low Density Polyethylene

Conto	Color	Recommended	Melt Flow Rate at 190°C/2.16kg	Density	Tensile Strength at Yield	Elongation at Break
Grade	Color	Application	ISO 1133	ISO 1183	ISO 527	ISO 527
			g/10 min	g/cm ³	MPa	%
LLCO1-156SK	Natural - Rank A	Shopping bag, Film	1.8	0.92	13	>300

Polypropylene

<u>___</u>

	IICAL CO., LTD.						Th	ailand
Grade	Color	Recommended	Melt Flow Rate	Density	Flexural Modulus	Tensile Strength at Yield	Elongation at Break	Notched Izod Impact
Graue	Color	Application	ASTM D1238	ASTM D792	ASTM D790	ASTM D638	ASTM D638	ASTM D256 @23°C
			g/10 min	g/cm³	MPa	MPa	%	J/m
PPC01-160SK	Natural	Injected part, E&E, Autopart, Furniture	8	0.90	1,000	24	60	60
PPC02-1382	White	Injected part, E&E, Autopart, Furniture	12	0.92	950	23	40	70
PPC16-1469	Black	Injected part, E&E, Autopart, Furniture	12	0.92	950	23	40	70

Acrylonitrile Butadiene Styrene

Grada	Color	Recommended	Melt Flow Rate at 200°C/10kg	Density	Flexural Modulus	Tensile Strength at Yield	Elongation at Break	Notched Izod Impact
Grade	Color	Application	ASTM D1238	ASTM D792	ASTM D790	ASTM D638	ASTM D638	ASTM D256@23°C
			g/10 min	g/cm³	MPa	MPa	%	J/m
ABC16-1363	Black	Injected part, E&E, Furniture	18	1.06	2,100	43	25	170

High Impact Polystyrene

Grade	Grade Color A		Melt Flow Rate at 200°C/5kg ASTM D1238	Density ASTM D792	Flexural Modulus ASTM D790	Tensile Strength at Yield ASTM D638	Elongation at Break ASTM D638	Notched Izod Impact ASTM D256@23°C
			g/10 min	g/cm³	MPa	MPa	%	J/m
HIC16-1389	Black	Injected part, E&E, Furniture	6	1.05	2,100	26	20	55



Plastics Materials Color



NATURAL



NATURAL WHITE



WHITE



NATURAL GREY

TRANSLUCENT



HONEY



LIGHT GREY



GREY



YELLOW



BLUE



GREEN

BLACK

Advanced Recycling

This technology will convert post-consumer plastics that have been difficult to recycle into recycled feedstock, which will then be reproduced into recycled plastic resins of equivalent quality to virgin plastic resins. Moreover, Advanced Recycling technology will encourage the circular economy's effective use of resources and eliminate waste to landfills, leading to reduction of greenhouse gas emissions from waste burning.

SCGC is the first company in Thailand certified with the International Sustainability and Carbon Certification "ISCC PLUS" throughout whole supply chain, accelerating advancement of high-quality post-consumer recycled resins to meet ESG commitment.



The Scope of ISCC Plus Certification for Advanced Recycling

Advanced Recycling



	Deservation	Melt Flow Rate at 230°C/2.16kg	Density	Flexural Modulus	Tensile Strength at Break	Tensile Strength at Yield	Elongation at Break	Elongation at Yield	Notched Izod Impact
Grade	Recommended Application	ASTM D1238	ASTM 1505	ASTM D790	ASTM D638	ASTM D638	ASTM D638	ASTM D638	ASTM D256@23°C
		g/10 min	g/cm ³	MPa	MPa	MPa	%	%	J/m
AP400S	Yarn, Raffia, Monofilament	3.5	0.910	1,520	23	34	650	-	40
AP405F	BOPP Film	3.0	0.900	1,500	-	35	-	95	47
AP303S	Thermoforming	2.3	0.910	1,863	-	39	-	7	59
AP901J	Thin wall injection	60	0.910	1,569	-	35	-	-	38
AP601F	IPP Film	10	0.910	-	ASTM D882 MD : 300*, TD : 100*	-	-	ASTM D882 MD : 500*, TD : 100*	-
AP607F	Cast Film	7	0.910	1600**	MD : 36.3**,	ASTM D882 MD : 28.4**, TD : 22.6**	MD : 470**,		-
AP951J	Injection	28	0.910	1,176	19	29	-	-	50
AP842J	Injection	40	0.910	1,420	18	29	-	-	74
AP701J	General Purpose	12	0.910	1,520	20	38	650	_	34
AP705JM	Healthcare, Phamaceutical	12	0.910	1,422	-	31	650	-	29

Noted:

hand have been and the state of the state of

(*) Properties obtained from film produced on a pilot line at TPE, 35 micron, cooling water temperature 25 °C, MD = Machine Direction, TD = Transverse Direction

(**) Properties obtained from experiment on a pilot line, Film thickness 25 micron, MD = Machine Direction, TD = Transverse Direction



THAILAND SCG CHEMICALS PLC. 1 SIAM CEMENT ROAD, BANGSUE, BANGKOK 10800 THAILAND

Tel: + 662 586 1111 Email: greenpolymer@scg.com www.scgchemicals.com

Sirplaste

PORTUGAL URBANIZAÇÃO INDUSTRIAL DA SANTEIRA LOTE 76 SANTEIRA 2480-410 PORTO DE MÓS

Tel: + 351 244 870 070 Email: sirplaste@sirplaste.pt www.sirplaste.pt



THAILAND 3/3 MOO 1, PIMPAVAS ROAD, PIMPA, BANGPAKONG, CHACHOENGSAO 24180 THAILAND

Tel +663 8570 4004 www.teamplasgroup.com