

## **ROTATIONAL MOLDING**







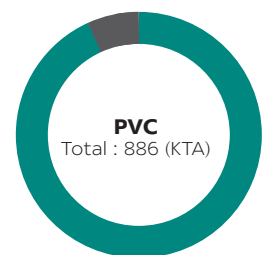
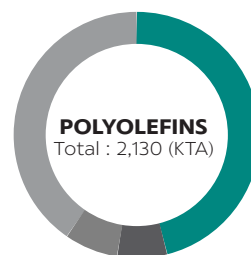
## About SCG Chemicals or SCGC

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”**







# ROTATIONAL MOLDING

**SCGC has developed innovative resins and compounds for a diverse range of uses, focusing on user's benefit along with environment impact.**

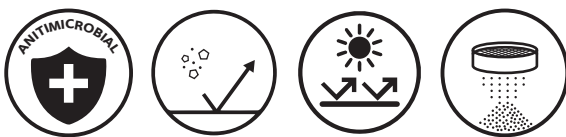
Today, consumer behaviors and trends are changing faster than ever. People are increasingly concerned about health, well-being, and environmental issues. To satisfy these new market demands, SCGC has developed innovative resins and compounds for a diverse range of uses. As the leading manufacturer of linear low-density polyethylene (LLDPE) resins and compounder of materials for rotational molding applications, SCGC offers high quality products with superior fit for today's market.

SCGC's superior production expertise enables our rotational molding compounds to be processed into various applications with exceptional strength and durability. To meet functional requirements, compounds can be formed with anti-microbial or

Anti-static properties. Opacity levels, durability, and UV-resistance can also be fine-tuned. Moreover, compounds come in a variety of colors and different special effects, making sharp aesthetic designs possible.

SCGC's certified food grade compounds contain no toxic heavy metals, suitable for hygienic applications especially household water tanks. Furthermore, these compounds are completely recyclable, and able to be mixed in with post-consumer resins (PCR) from other sources to form new products.

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



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## Design for Sustainability

**3** GOOD HEALTH  
AND WELL-BEING



**6** CLEAN WATER  
AND SANITATION



**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**13** CLIMATE  
ACTION



**17** PARTNERSHIPS  
FOR THE GOALS







# BETTER MATERIAL FOR BETTER WORLD



## Reduce Rejected Rate Production-efficient

M72	
Characteristics	<ul style="list-style-type: none"><li>- Exceptional powder flowability for intricate parts</li><li>- No pinholes</li><li>- Superior gloss and smooth finishing surface</li></ul>
Application	Cooler boxes



## Reduce Production Steps Less CO<sub>2</sub> emissions

S15	
Characteristics	<ul style="list-style-type: none"><li>- Low shrinkage and warpage</li><li>- Consistent dimensions</li><li>- UV stabilized for indoor and semi-outdoor use</li><li>- Strong adhesion to PU foam</li></ul>
Application	Cooler boxes



## Reduce Cycle Time Energy-efficient

M50/M53	
Characteristics	<ul style="list-style-type: none"><li>- Excellent ESCR</li><li>- Good chemical resistance</li><li>- TÜV-approved</li><li>- High impact resistance</li><li>- Low warpage</li></ul>
Application	Fuel tanks





## SUPERIOR PERFORMANCE



### PE Foam

#### XC1252B (4X-8X)

Characteristics	- Customized expansion up to 8 times
	- Thermal & Sound insulation
Application	- Light weight
	- High stiffness
Insulated boxes, Multi-layer applications	

### Super Linear HDPE compound

#### 3985

Characteristics	- Excellent stiffness : 30% higher than MDPE
	- Excellent impact strength
Application	- Fast cycle time and excellent flow
	- Wide processing window
Kayak	



### XLPE Crosslink

#### 1507BKAP

Characteristics	- High temperature service 60°C
	- High stiffness/impact resistance
Application	- Chemical Resistance
	Fuel tanks







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# Rotational Molding Products

GRADE	M3804RU	M3804RW	M10	M9001RW	M90
Natural Pellet	✓	✓		✓	
Natural Powder	✓	✓		✓	
Color Compound			✓		✓
Density (g/10 cm <sup>3</sup> ) ASTM D1505 (Non-Anneal)	0.938			0.939	
Melt index [g/10 min.aq] ASTM D1238 @190°C, 2.16 kg	4			3.2	
Flexural modulus kg/cm <sup>2</sup> (Mpa) ASTM D790	7,138 (700)			7,546 (740)	
Tensile strength at yield kg/cm <sup>2</sup> (Mpa) ASTM D638	203 (20)			214 (21)	
Elongation at break [%] ASTM D638	800			1,100	
ARM impact strength at -40°C [J/mm] ARM Method (5 mm part)	27			29	
UV level ASTM G155	2	8	8	20	20
Optimum PIAT* [°C] TPE Method**	180	220	220	200	200
Key characteristics	<ul style="list-style-type: none"> <li>- High stiffness</li> <li>- Good impact resistance</li> <li>- Fast cooking</li> <li>- UV-stabilized (UV2) for indoor/ semi-indoor use</li> </ul>		<ul style="list-style-type: none"> <li>- High stiffness</li> <li>- High thermal stability</li> <li>- Good impact resistance</li> <li>- High UV protection (UV8) for outdoor use</li> </ul>		<ul style="list-style-type: none"> <li>- High stiffness</li> <li>- Excellent impact resistance</li> <li>- Long-lasting durability</li> <li>- Good processability</li> <li>- Meets AS/NZS 4766 requirements</li> </ul>
Recommended applications	<ul style="list-style-type: none"> <li>- Water tanks (&lt;5,000 liter)</li> <li>- General purpose applications</li> <li>- Bins</li> <li>- Containers</li> <li>- Pallets</li> </ul>		<ul style="list-style-type: none"> <li>- Water tanks (&lt;5,000 liter)</li> <li>- General purpose applications</li> <li>- Intermediate bulk containers (IBC)</li> </ul>		<ul style="list-style-type: none"> <li>- Medium to large water tanks (5,000 L-22,500 L)</li> <li>- Manholes</li> <li>- Septic tanks</li> <li>- Underground water tanks</li> <li>- Kayaks</li> <li>- Wheelbarrow</li> </ul>

Remarks: \* Optimum PIAT (Peak Internal Temperature) may vary depending on color strength and molding conditions.  
 \*\* Oven temperature 280°C, rotomolded part thickness 5 mm.  
 Values quoted here are representative of tested specimens only. This data is not intended for specification purposes.  
 For technical assistance, please contact SCGC representatives.  
 All products are butene comonomers except for M3504DXP and M50, which are octene comonomers.  
 \*\*\* Except black compound





GRADE	M2904RU	M3204RU	M30	M31	M40	M735RU	M735RW	M70
Natural Pellet	✓	✓				✓	✓	
Natural Powder	✓	✓				✓	✓	
Color Compound			✓	✓	✓			✓
Density (g/10 cm <sup>3</sup> ) ASTM D1505 (Non-Anneal)	0.929	0.932				0.932		
Melt index [g/10 min.aq] ASTM D1238 @190°C, 2.16 kg	4.2	4				6		
Flexural modulus kg/cm <sup>2</sup> (Mpa) ASTM D790	4,385 (430)	5,812 (570)				5,812 (570)		
Tensile strength at yield kg/cm <sup>2</sup> (Mpa) ASTM D638	143 (14)	173 (17)				173 (17)		
Elongation at break [%] ASTM D638	1,150	1,000				1,000		
ARM impact strength at -40°C [J/mm] ARM Method (5 mm part)	29	28				25		
UV level ASTM G155	2	2	2	2	8	4	8	8
Optimum PIAT* [°C] TPE Method**	190	180	210	190	190	200	210	210
Key characteristics	<ul style="list-style-type: none"> <li>- High impact resistance</li> <li>- Low shrinkage and warpage</li> <li>- Consistent dimension</li> <li>- For indoor/ semi-outdoor use</li> </ul>	<ul style="list-style-type: none"> <li>- Excellent impact resistance</li> <li>- Suitable for low temperature</li> <li>- Good processability</li> <li>- Low warpage</li> <li>- Good dimension tolerance</li> </ul>				<ul style="list-style-type: none"> <li>- Suitable for intricate parts</li> <li>- Good impact resistance</li> <li>- Excellent surface finishes</li> <li>- Good dimension tolerance</li> <li>- Comply with flame class UL94 HB</li> </ul>		
Recommended applications	<ul style="list-style-type: none"> <li>- Toys</li> <li>- Small containers</li> </ul>	<ul style="list-style-type: none"> <li>- Cooler boxes</li> <li>- Playgrounds</li> <li>- Traffic Cones</li> <li>- Road Barriers</li> </ul>				<ul style="list-style-type: none"> <li>- Decorative items: Flower pots, small toys</li> <li>- LED lamp covers</li> <li>- Automotive and transportation parts</li> <li>- Industrial parts</li> <li>- Cleaning machines</li> <li>- Air blowers</li> </ul>		



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## Rotational Molding Products

GRADE	M72	S15	3982P	3983 (Metallic Effect)	M1A (Anti-Bact)	M3B (Anti-Static)	M7B (Anti-Static)
Natural Pellet							
Natural Powder			✓				
Color Compound	✓	✓		✓	✓	✓	✓
Density (g/10 cm <sup>3</sup> ) ASTM D1505 (Non-Anneal)	0.932	0.932	0.954	0.939	0.938	0.932	0.932
Melt index [g/10 min.aq] ASTM D1238 @190°C, 2.16 kg	6	4	0.04	3.2	4	4	6
Flexural modulus kg/cm <sup>2</sup> (Mpa) ASTM D790	5,812 (570)	5,506 (540)	-	7,546 (740)	7,138 (700)	5,812 (570)	5,812 (570)
Tensile strength at yield kg/cm <sup>2</sup> (Mpa) ASTM D638	173 (17)	174 (17)	-	214 (21)	204 (20)	173 (17)	173 (17)
Elongation at break [%] ASTM D638	800	700	-	1,100	800	1,100	700
ARM impact strength at -40°C [J/mm] ARM Method (5 mm part)	25	N/A	-	29	27	28	25
UV level ASTM G155	4	2	-	20	8	2	8
Optimum PIAT* [°C] TPE Method**	200	190	-	200	215	210	210
Key characteristics	<ul style="list-style-type: none"> <li>- Excellent powder flowability for intricate parts</li> <li>- Superior gloss and surface finish</li> <li>- No pinholes</li> <li>- Smooth inside surface</li> </ul>	<ul style="list-style-type: none"> <li>- Low shrinkage and warpage</li> <li>- Consistent dimension</li> <li>- UV-stabilized (UV2) for indoor/semi-indoor</li> <li>- Self-adhere to Polyurethane foam (eliminate second-shot process)</li> </ul>	<ul style="list-style-type: none"> <li>- Virgin materials</li> <li>- Enhance bonding between PE and PU foam</li> <li>- Free flow, high bulk density</li> <li>- Recyclable</li> </ul>	<ul style="list-style-type: none"> <li>- High stiffness</li> <li>- High impact resistance</li> <li>- Long-lasting durability</li> <li>- Good processability</li> <li>- High UV protection for outdoor use</li> </ul>	<ul style="list-style-type: none"> <li>- Possess anti-bacteria and anti-fungal capability according to JIS Z 2801:2000</li> <li>- Nanosilver as an active ingredient</li> <li>- High stiffness</li> <li>- Good processability</li> <li>- High impact resistance</li> </ul>	<ul style="list-style-type: none"> <li>- Reduce or eliminate a static build up</li> <li>- High impact resistance</li> <li>- Good processability</li> <li>- Good dimension tolerance</li> <li>- Low shrinkage and warpage</li> <li>- Consistent dimension</li> </ul>	<ul style="list-style-type: none"> <li>- Reduce or eliminate a static build up</li> <li>- Suitable for intricate parts</li> <li>- Good impact resistance</li> <li>- Excellent surface finishes</li> <li>- Good dimension tolerance</li> <li>- Comply with flame class UL94 HB</li> </ul>
Recommended applications	<ul style="list-style-type: none"> <li>- Cooler boxes</li> <li>- Decorative itmes</li> </ul>	<ul style="list-style-type: none"> <li>- Cooler Box</li> <li>- Dry Ice Box</li> </ul>	<ul style="list-style-type: none"> <li>- Insulated container with PU foam</li> <li>- Cooler box with PU foam</li> <li>- Buoys with PU foam filled</li> <li>- Multi-layer (PE/PU)</li> </ul>	<ul style="list-style-type: none"> <li>- Water storage tanks</li> <li>- Material handling containers</li> <li>- Decorative items</li> </ul>	<ul style="list-style-type: none"> <li>- Water tank inner layer</li> <li>- Food storage container</li> <li>- Trash bins</li> </ul>	<ul style="list-style-type: none"> <li>- Cooler boxes</li> <li>- Portable containers</li> <li>- Material handling containers</li> <li>- General purpose moulding</li> <li>- Fish bins</li> </ul>	<ul style="list-style-type: none"> <li>- Lawn and garden articles</li> <li>- Decorative items</li> <li>- LED lamp covers</li> <li>- Small industrial parts</li> <li>- Intricate automotive articles</li> </ul>

Remarks: \*Depending on specific PU foam ratio and injection condition. Please contact SCGC technical service team to support the product instruction.





# SPECIALTY APPLICATIONS

	OCTENE COMONOMER			CROSSLINKED (XLPE)	PE FOAM	
GRADE	M3504DXP	M50	M53	1507	XC1252B4	XC1252B6
Natural Pellet						
Natural Powder	✓				✓	✓
Color Compound		✓	✓	✓		
Density (g/10 cm <sup>3</sup> ) ASTM D1505 (Non-Anneal)	-	0.935	-	0.95	0.23	0.16
Melt index [g/10 min.aq] ASTM D1238 @190°C, 2.16 kg		4		-	-	-
Flexural modulus kg/cm <sup>2</sup> (Mpa) ASTM D790		5,608 (550)		6,628 (650)	-	-
Tensile strength at yield kg/cm <sup>2</sup> (Mpa) ASTM D638		173 (17)		204 (20)	-	-
Elongation at break [%] ASTM D638		1,000		900	-	-
ARM impact strength at -40°C [J/mm] ARM Method (5 mm part)		27		35	-	-
UV level ASTM G155	8	8	20	8	-	-
Optimum PIAT* [°C] TPE Method**	210	210	210	190-240	-	-
Key characteristics	<ul style="list-style-type: none"> <li>- Excellent ESCR</li> <li>- Good chemical resistance</li> <li>- TÜV-approved</li> <li>- High impact resistance</li> <li>- Low warpage</li> </ul>			<ul style="list-style-type: none"> <li>- Excellent ESCR</li> <li>- Excellent impact resistance</li> <li>- High toughness</li> </ul>	<ul style="list-style-type: none"> <li>- Provide stiffness as reinforcement inner layer</li> <li>- Increase thickness without adding the weight</li> <li>- Fully recyclable</li> <li>- Decrease warpage on flat area</li> </ul>	
Recommended applications	<ul style="list-style-type: none"> <li>- Fuel tanks</li> <li>- Intermediate bulk containers (IBC)</li> <li>- Pallets</li> <li>- Chemical tanks</li> <li>- Pesticide tanks</li> <li>- Liquid fertilizer tanks</li> </ul>			<ul style="list-style-type: none"> <li>- Diesel fuel tanks</li> <li>- Hydraulic tanks</li> <li>- Chemicals tanks</li> </ul>	<ul style="list-style-type: none"> <li>- Ocean buoys and floats</li> <li>- Insulated containers</li> <li>- Boat hulls</li> <li>- Pallets</li> </ul>	

# SCGC™

## HDPE

HDPE ROTO MOLDING				BLOWMOLDING	
GRADE	H400RW	S16	3985	GRADE	S800B
Natural Pellet	✓		✓	Natural Pellet	✓
Natural Powder	✓		✓	Natural Powder	
Color Compound		✓	✓	Color Compound	✓
Density (g/10 cm³) ASTM D1505 (Non-Anneal)	0.940	0.945	0.950	Density (g/10 cm³) ASTM D1505 (Non-Anneal)	0.949
Melt index [g/10 min.aq] ASTM D1238 @190°C, 2.16 kg	4	3.5	5	Melt index [g/10 min.aq] ASTM D1238 @190°C, 2.16 kg	0.19
Flexural modulus kg/cm²(Mpa) ASTM D790	7138 (700)	9687 (950)	9,279 (910)	Flexural modulus kg/cm²(Mpa) ASTM D790	10,000 (980)
Tensile strength at yield kg/cm²(Mpa) ASTM D638	203 (20)	234 (23)	224 (22)	Tensile strength at yield kg/cm²(Mpa) ISO 527 @ Crosshead speed 100 mm/min	234 (23)
Elongation at break [%] ASTM D638	800	1,100	1,160	Elongation at break [%] ISO 527 @ Crosshead speed 100 mm/min	700
ARM impact strength at -40°C [J/mm] ARM Method (5 mm part)	27	29	28	ESCR Hrs, F <sub>0</sub>	>10,000
UV level ASTM G155	8	8	8	UV level ASTM G155	No UV
Optimum PIAT* [°C] TPE Method**	220	220	200	Notched Izod Impact kg.cm/cm ASTM D 256 @ -20 °C	30
Key characteristics	<ul style="list-style-type: none"> <li>- High stiffness</li> <li>- High thermal stability</li> <li>- Good impact strength</li> <li>- High UV protection (UV8) for outdoor use</li> </ul>	<ul style="list-style-type: none"> <li>- Excellent stiffness</li> <li>- Superior rigidity</li> <li>- Good impact strength</li> <li>- High thermal stability</li> <li>- UV8 for outdoor use</li> <li>- Excellent color fastness</li> </ul>	<ul style="list-style-type: none"> <li>- Excellent stiffness</li> <li>- High impact resistance</li> <li>- Fast cycle time</li> <li>- Excellent flow</li> </ul>	Key characteristics	<ul style="list-style-type: none"> <li>- Excellent processing</li> <li>- High thermal stability</li> <li>- Outstanding mechanical strength</li> </ul>
Recommended applications	<ul style="list-style-type: none"> <li>- Water storage tanks</li> <li>- Small to medium tanks</li> <li>- Material handling equipment</li> <li>- Intermediate bulk containers (IBC)</li> </ul>	<ul style="list-style-type: none"> <li>- Underground water tanks</li> <li>- Kayaks</li> <li>- Pallets</li> <li>- Manholes</li> </ul>	<ul style="list-style-type: none"> <li>- Kayaks</li> <li>- Pallets</li> <li>- Underground tanks</li> <li>- Inspection pits</li> </ul>	Recommended applications	<ul style="list-style-type: none"> <li>- Large Water Tanks (&gt;1000 L)</li> <li>- IBC Tanks</li> </ul>



# CUSTOMIZED SOLUTIONS FOR YOU












## Plain Colors

 <b>YLN9</b> LAGUNA YELLOW	 <b>ORO8</b> VERMILION ORANGE	 <b>SPM7</b> PINK PANTHER	 <b>BLO5</b> ICEBERG BLUE	 <b>GRM4</b> MAMBA GREEN	 <b>GRU1</b> MIST GREEN	 <b>GYM6</b> POSH GREY	 <b>BRU8</b> BIRCH GREY	 <b>WTT2</b> SMOKY WHITE	 <b>WTN9</b> SNOW WHITE
 <b>YLM9</b> TUSCANY YELLOW	 <b>ORO4</b> SQUASH ORANGE	 <b>VLM9</b> BABY LILAC	 <b>BLM1</b> CYAN BLUE	 <b>GRM1</b> HEALTH GREEN	 <b>GRT1</b> WILD FERN	 <b>GYW3</b> SHARK GREY	 <b>GYN7</b> ENGINE GREY	 <b>BRT6</b> MERINO	 <b>WTM1</b> CREAMY WHITE
 <b>YLO6</b> MUSTARD	 <b>RDN4</b> VERMILION	 <b>DBO4</b> STAINED GLASS BLUE	 <b>BLN5</b> AZURE BLUE	 <b>GRO6</b> LOCOMOTIVE GREEN	 <b>GRT5</b> RIVERGUM GREEN	 <b>GYV3</b> PIGEON GREY	 <b>GYU8</b> STEEL	 <b>BRT1</b> BEIGE	 <b>WTN5</b> ROSE WHITE
 <b>YLN7</b> BUMBLEBEE	 <b>RDM8</b> SCARLET RED	 <b>DBN7</b> NAUTICAL BLUE	 <b>DBM1</b> BLUEBERRY	 <b>GRQ7</b> PINE GREEN	 <b>GRT3</b> HERITAGE GREEN	 <b>GYV2</b> SLATE GREY	 <b>GYT1</b> ASH	 <b>BEM7</b> HAZELNUT BEIGE	

## Special Effects

Stone								Metallic	Terracotta
 <b>CRT1</b> FRENCH VANILLA	 <b>SSM1</b> SAND MARBLE	 <b>SLM1</b> SUNRISE	 <b>SST3</b> PETRA GOLD	 <b>GET2</b> GREEN TEA	 <b>LLM1</b> LEMON LIME	 <b>SST1</b> SANDSTONE	 <b>MST2</b> GREY GRANITE		
 <b>WMM1</b> WHITE MARBLE	 <b>SST6</b> SAND BEACH	 <b>VNT1</b> MORTAR GRANITE	 <b>RST1</b> ROSETTA	 <b>DET1</b> DARK EMERALD	 <b>WNT1</b> LATERITE GRANITE	 <b>MST1</b> MILLSTONE	 <b>SOT1</b> SPARKLE OBSIDIAN		

\*Actual colors may vary. For more details, please contact a SCGC representative.

Grinding Size (µm)	UV Levels	Anti-Microbial	Anti-Static	Post-Consumer Recycled Resin (PCR)	Collaboration from Design to Production
 1000					
 710					
 600					
 500					
 425					



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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.
- 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.