



## **PIPE COMPOUND**





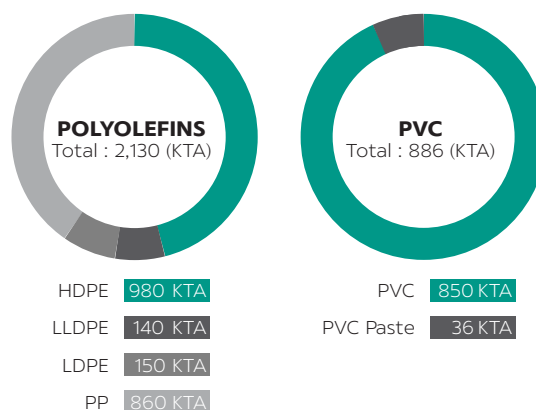
## About SCG Chemicals or SCGC

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)

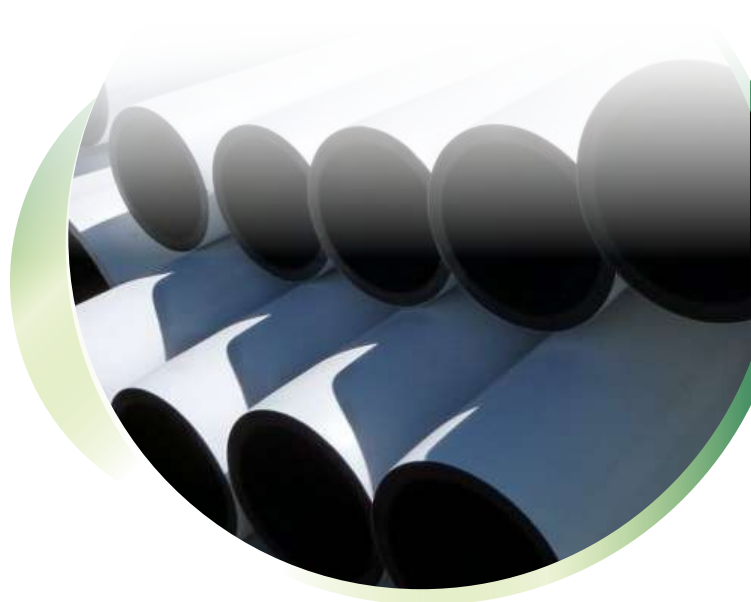


## Sustainability Direction



**“Innovation That’s Real”**





# PIPE COMPOUND

## Innovation for Better Infrastructure

**“SCGC has developed material for high-quality PE pipe with world-class standard, suitable for a variety of product applications allowing a development of better city infrastructure”**

In recent years, the rapidly growing world population has led to an ever-increasing demand for resources, coupled with the expansion of urbanization in rural areas. Consequently, the need for better infrastructure has become an essential factor in improving people’s livelihoods. Better infrastructure requires better PE pipes for use in utility systems.

Because SCGC recognizes the importance of these issues, we have developed a special plastic pipe product, the SCGC™ HDPE Pipe Compound. Created using bimodal technology, this product is specially designed for use with both high pressure and non-pressure applications.

SCGC’s philosophy is to produce high-quality products while protecting the environment and providing our customers with the best services along the value chain. Thus, SCGC™ HDPE Compound has been recognized by many world-class, accredited laboratories. Furthermore, this compound is suitable for a variety of applications, such as being used in water, gas, slurry, conduit, and sewerage pipes, as well as parts in drainage systems.

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

## Example of Certifications



### Design for Sustainability



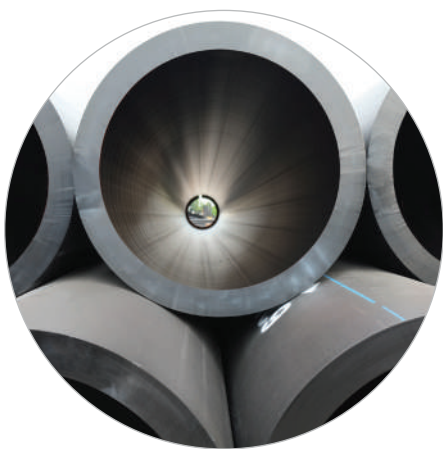




## VARIOUS INDUSTRIAL APPLICATIONS

### Water Pipe Systems

Due to rising world populations, water scarcity has become a serious issue worldwide. As demand for freshwater soars, the demand for clean water distribution systems has also risen in parallel. In recognition of this issue, SCGC offers its SCGC™ HDPE Compound, a high-quality material with low sagging properties, which provides excellent wall thickness control in large, thick wall pipe. Safe for transporting drinking water, the material meets worldwide standards and contributes to the quality and durability of the water distribution system. Furthermore, the material is tough and exhibits no chemical leakage, therefore being safe for underwater use, such as being installed under water to transport clean water to island locations.



### Mining Pipe Systems

To date, polyethylene pipes have been repeatedly refined and developed to suit a wide variety of uses. With superior performance, they are now commonly used to replace steel pipes in industrial and mining applications. In addition to their excellent chemical resistance, the key advantages of polyethylene pipes are that they have high pressure and temperature resistance, longer lifetimes, and the ability to convey substances in various states, whether in gas-solid, or slurry form. Other applications for the SCGC™ HDPE Compound include being used to improve abrasion resistance, deterring thickness loss in pipes during transport of sediments and slurries. The compound can also be used for large, thick wall pipe, accommodating the growth of large-scale industries.



### Gas Pipe Systems

The three most important factors for gas pipes are quality, reliability, and safety. Recognizing the importance of such factors, SCGC offers its SCGC™ HDPE Compound, which exhibits high performance against rapid crack propagation (RCP), slow crack growth (SCG), and gas constituent resistance, necessary functions for developing reliable pipe systems.







## Sheet/Lining/Chemicals Tank

High strength and excellent processability for large and thick sheet extrusions

Grade	Standard Approval
H1000PC	DIBT Approval



## District Heating Pipes

High protective performance according to EN 253

Grade	Standard Approval
H1000PC H5211PC	EN 253



## Structural Large Drainage Pipes / Spiral Welding Pipes

Excellent stiffness, suitable for use in gravity pipes

Grade	Standard Approval
H1000PC	PAS 1065



## Above-ground Water Pipes

White compound with excellent weathering resistance and heat reduction conductivity, suitable for decreasing heat in water

Grade	Standard Approval
H1000PWI	AS/NZS 4130



## Irrigation Pipes (SCGC™ LLDPE)

Excellent processability and flexibility for easy coiling and uncoiling of pipes




Grade	Standard Approval
D682PC	Internal SCGC test report







## SCGC™ HDPE PIPE COMPOUND

GRADE	H112PC	H1000PCH	H1000PC
<b>Key characteristics</b>	<ul style="list-style-type: none"> <li>- High-performance PE112 with suitable balance between high slow crack growth and rapid crack propagation resistance</li> <li>- Excellent abrasion resistance, recommended for use in thick wall pipes and pipes with large diameters</li> </ul>	<ul style="list-style-type: none"> <li>- Black compound PE100RC with higher slow crack growth resistance and balance PE100 properties such as MRS and rapid crack propagation.</li> </ul>	<ul style="list-style-type: none"> <li>- PE100 black compound, guaranteed worldwide</li> <li>- Safe for use with drinking water</li> <li>- Excellent wall thickness control in pipes with large diameters</li> </ul>
<b>Color</b>			
<b>MFR @ 5 kg.</b> (g/10 min)	0.20	0.21	0.22
<b>Density compound</b> (g/cm <sup>3</sup> )	0.960	0.960	0.960
<b>Tensile strength at yield</b> (MPa)	24	24	24
<b>Slow crack growth (SCG)</b>	NPT > 500 h	ANPT > 300 h CRB > 1.5x10 <sup>6</sup> cycles AFNCT > 550 h SHT > 53.0 MPa	NPT > 500 h
<b>Rapid crack propagation (RCP)*</b> Critical pressure (bar)	≥10	≥10	≥10
<b>Standard approvals</b>	ISO 4427-1 EN 12201-1 ISO 4437-1 EN1555-1 AS/NZS 4131 ASTM D3350 TIS 2559	ISO4427-1 EN12201-1 ISO4437-1 EN1555-1 AS/NZ 4131 TIS2559	ISO 4427-1 EN12201-1 ISO 4437-1 EN1555-1 AS/NZS 4131 TIS 2559

**Remarks:** The given values are typical values measured on the product. Values herein are not to be construed as product specifications.

\*Tested on a 250mm pipe





### H5211PC

- PE 80 compound with high thermal stability and excellent processability

### H1000PBL

- Blue RAL 5005 PE100 compound, suitable for use in pressure pipes
- Excellent UV resistance
- High thermal stability for long-term use

### H1000PWI

- White PE100 compound with excellent weather resistance and low heat absorption, suitable for above-ground applications

### D682PC

- Black, Linear low density polyethylene (LLDPE) compound with excellent processability and flexibility, ensuring easy coiling and uncoiling for pipes



0.38

0.960

24

NPT> 500 h

≥8

ISO 4427-1  
EN 12201-1  
ISO 4437-1  
EN555-1  
AS/NZS 4131  
TIS 2559



0.22

0.960

24

NPT> 500 h

-

AS/NZS 4131  
TIS 2559



0.20

0.974

22

-

-

AS/NZS 4130



0.24  
(@2.16 kg)

0.946

17

-

-

Internal SCCG test report





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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.
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