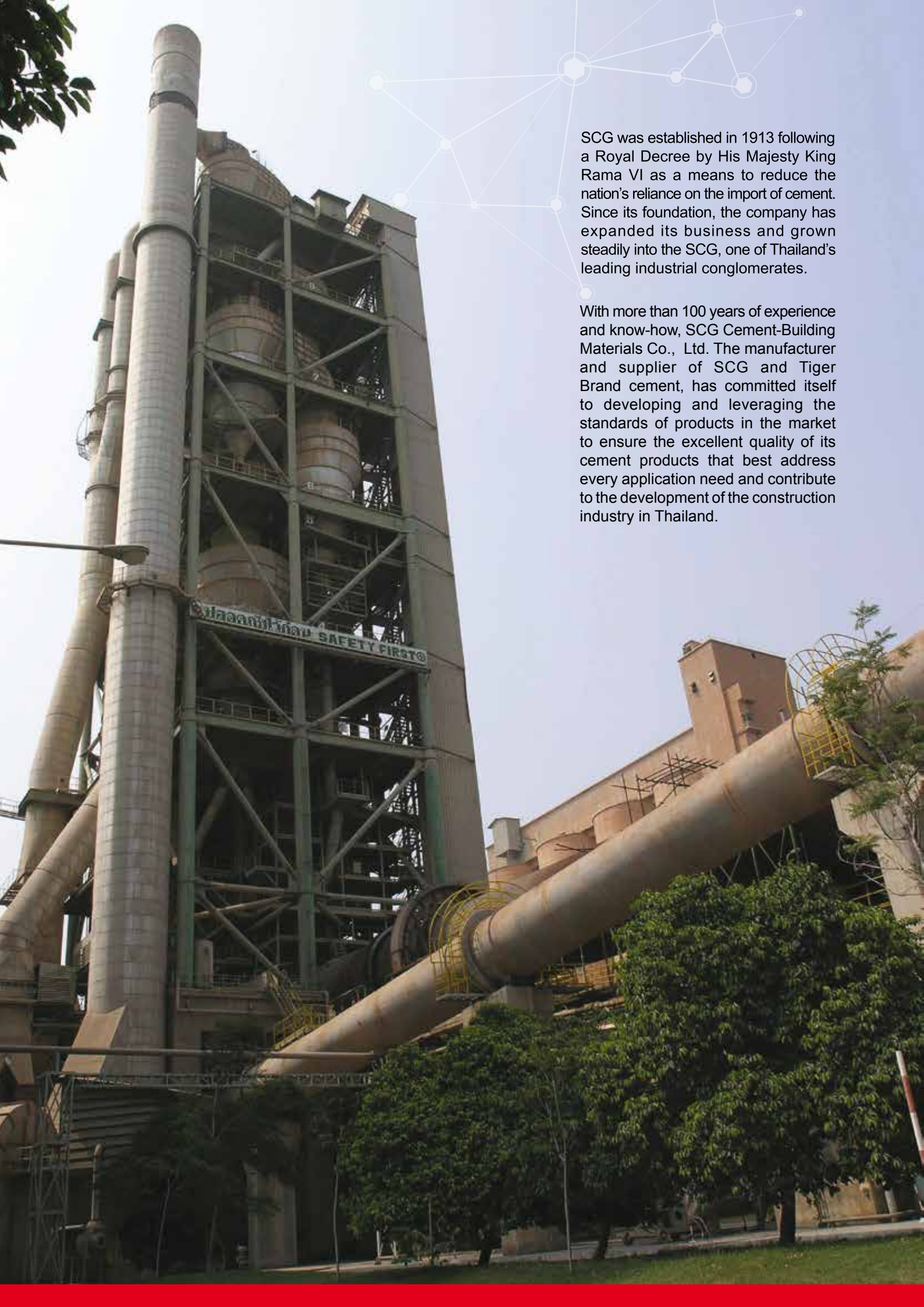
SCG CEMENT

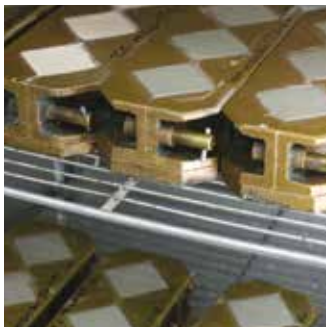
Innovative Cement for Structural Work
For a Better Quality of Life

PRODUCT CATALOGUE



SCG was established in 1913 following a Royal Decree by His Majesty King Rama VI as a means to reduce the nation's reliance on the import of cement. Since its foundation, the company has expanded its business and grown steadily into the SCG, one of Thailand's leading industrial conglomerates.

With more than 100 years of experience and know-how, SCG Cement-Building Materials Co., Ltd. The manufacturer and supplier of SCG and Tiger Brand cement, has committed itself to developing and leveraging the standards of products in the market to ensure the excellent quality of its cement products that best address every application need and contribute to the development of the construction industry in Thailand.



Reliable Quality
The company's manufacturing process conforms with SCG's contingent quality standards. Every stage of production and raw material selection through to the final stage before distribution is closely monitored and controlled to ascertain that the quality of products meets the prescribed standards such as ISO 9001 and ISO 14001.

Innovation in Product and Process
Produced using state-of-the-art machinery and production technology from overseas, the company's products undergo strict quality control before distribution to ensure their maximum performance and consistent quality.

Superb Quality
The company has developed and designed packaging that accommodates any demanding operating condition as well as providing good resistance to humidity and impacts to guarantee the freshness and quality of every bag of cement for excellent quality concrete work.

Quality and ISO Standards

Attained the Deming Prize, a global quality award, given by Union of Japanese Scientists and Engineers (JUSE)

Certified SCG Eco Value label endorsing eco-friendly products and services produced from the manufacturing processes that pose minimum harm to the environment in conformance with the ISO 14021 environmental management standards

Attained Green Industry Level 5 award both in mines and factories

TIS 849-2556

Attained Certification for Portland Pozzolan Cement from the Thai Industrial Standards Institute, Ministry of Industry

TIS 2594-2556

Attained Certification for General Use Hydraulic Cement (Type GU) from the Thai Industrial Attained ISO 9001 and ISO 14001 Certifications from theThai Industrial Standards Institute, Ministry of Industry

TIS 15 Part 1-2555

Attained Certification for Portland Cement from the Thai Industrial Standards, Ministry of Industry

ISO 9001 ISO 14001

Attained ISO 9001 and ISO 14001 Certifications from the Thai Industrial Standards Institute, Ministry of Industry

SCG CEMENT PLANT NETWORK

Kaeng Khoi Plant

The Siam Cement
(Kaeng Khoi) Co., Ltd.
33/1 Moo 3, Mittraphap Road
Ban Pa Sub-District,
Kaeng Khoi District,
Saraburi 18110

Ta Luang Plant

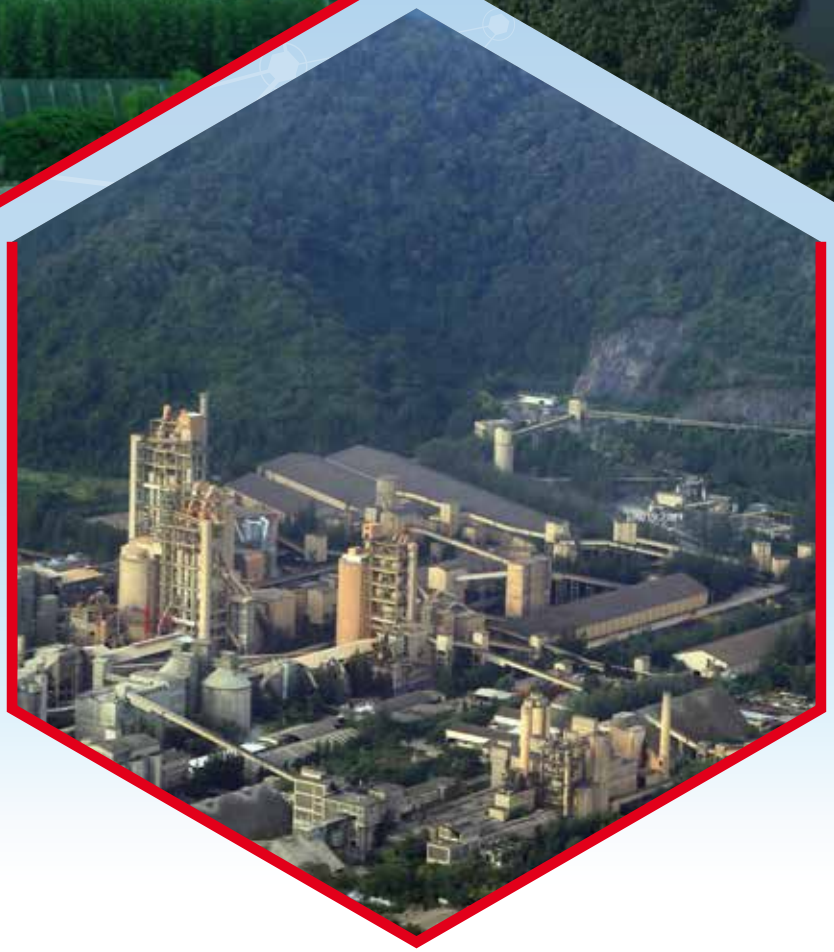
The Siam Cement
(Ta Luang) Co., Ltd.
1 Moo 9,
Ban Krua Sub-District,
Ban Mo District,
Saraburi 18270

Khao Wong Plant

The Siam Cement
(Ta Luang) Co., Ltd.
Khao Wong Plant
28 Moo 4, Na Pralan-Ban Krua Road
Khao Wong Sub-District,
Praputtabath District,
Saraburi 18120

Lampang Plant

The Siam Cement
(Lampang) Co., Ltd.
279 Moo 5,
Bansa Sub-District,
Chae Hom District
Lampang 52120



Thung Song Plant

The Siam Cement
(Thung Song) Co., Ltd.
52 Moo 6,
Thung Song-Huai Yot Road
Tee Wang Sub-District,
Thung Song District,
Nakhon Sri thammarat 80110

PRODUCT INFORMATION

NEW

Innovative Eco-friendly Cement for Structural Work

SCG
Hybrid Cement

SCG Hybrid Cement is a general use hydraulic cement (Type GU) formulates using Materials Science and innovative Hybrid Technology composed of clinker, gypsum, calcium compound and other special active ingredients. The cement provides high compressive strength, resulting in strong and durable concrete construction. SCG Hybrid Cement is also environmentally-friendly.

Innovative Cement for the Ultimate Structural Work

SCG
Portland Cement Type I

This cement is classified as Portland cement Type I which provides high compressive strength. It is suitable for concrete construction requiring high strength such as foundations, columns, beams and slabs of buildings and estates as well as large constructions like high-rise buildings, roads, expressways, stadiums and airports. The constrution stands out for its excellent strength and durability.

Innovative High Early Strength Cement

SCG
Portland Cement Type III

With a faster rate of high early strength, this Portland Cement Type 3 allows contractors to complete work faster. It is ideal for the production of prestressed concrete products such as concrete planks, piles and electrical poles.

Innovative High-Strength Cement for Coastal Areas

Innovative High-Strength Cement for Saline Soil in the Northeastern Area

Innovative Cement for Superb Quality Concrete Products

SCG Marine Cement

SCG Marine Cement is a special Portland Pozzolan Cement for structural work. It is suitable for concrete construction exposed to the coastal environment in brackish areas where structures are exposed to sea aerosols or sea water.

SCG Portland Pozzolan Cement

SCG Portland Pozzolan Cement provides high resistance to chlorides and sulphate attack. It is suitable for concrete constrution exposed to saline soil in north-easten Thailand and in brackish areas.

SCG Precast Cement

SCG Precast Cement provides high compressive strength, resulting in rigid and durable concrete. It is ideal for the manufacture of precast concrete products such as precast concrete planks, piles, pipes, cement building structure such as foundations, columns, beams and slabs which are remarkably strong and durable.

NEW

Innovative Eco-friendly Cement for Structural Work

Going one step further to provide strong and durable structure for a better quality of life and environment

The first in Thailand to have achieved the new industrial standard specifications

TIS 2594-2556

scg eco value

Green Industry 5

Product Information

Ideal for the structural work of buildings and estates such as foundations, columns, beams, and slabs as well as infrastructure such as roads and bridges. With high compressive strength, the concrete construction is strong and durable. The innovative cement is also environmentally-friendly.

- Cement bags feature a thin plastic lining to protect the cement from humidity and provide resistance to impact, maintaining the freshness of the cement.
- Available in 50 kg./bag.

Mix Design

Materials Volume Ratio	Cement	Fine Aggregates (Sand)	Coarse Aggregates (Gravel)	Water
Lean Concrete	1	3	6	1
Conventional Concrete	1	2	4	1 to

Remarks: 1. The concrete mix design may vary depending on individual project requirements under the supervision and recommendations of civil engineers.
2. The mixing and use of concrete may vary depending on individual project requirements under the supervision and recommendations of civil engineers.

SCG Hybrid Cement

HYBRID
for environment

Product Name and Composition

SCG Hybrid Cement is a general use hydraulic cement (Type GU) formulated using Materials Science and innovative hybrid technology. Composed of clinker, gypsum, calcium compound, special active ingredients, the cement conforms to the TIS 2594-2556 industrial standards.

The first in Thailand to have achieved the new industrial standard specifications

SCG Hybrid Cement

HIGHER STRENGTH than other Ordinary Portland cement

ABRASION RESISTANCE provides resistance to abrasion, eliminates concrete dusting and reduces spalling

REDUCE CRACK minimize possibility of surface crack caused by shrinkage

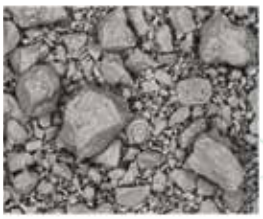
LOW POROSITY resulting in higher-density concrete construction

ENVIRONMENTALLY FRIENDLY by using raw materials and offering an eco-friendly production process

ACCORDING TO THAI INDUSTRIAL STANDARD SPECIFICATION FOR HYBRID CEMENT, TIS 2594 - 2556				TYPICAL TEST RESULTS
PHYSICAL REQUIREMENTS				
Autoclave Expansion	Percent (%),	0.80	Max.	-0.03
TIME OF SETTING (Vicat Test)				
Initial	Minutes	45	Min.	115
Final	Minutes	420	Max.	150
COMPRESSIVE STRENGTH TEST:				
3 Days	Kgf/cm^2, (MPa)	133 (13.0)	Min.	329 (32.2)
7 Days	Kgf/cm^2, (MPa)	204 (20.0)	Min.	436 (42.7)
28 Days	Kgf/cm^2, (MPa)	286 (28.0)	Min.	-
Expansion Of Mortar Bar Stored In Water 14 days	Percent (%),	0.020	Max.	- 0.001

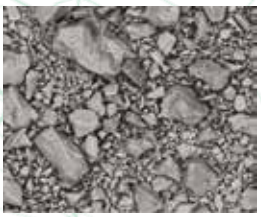
High-density Concrete

Cement particles pack densely



100 um OPC Type I

Ordinary Portland Cement



100 um Hydraulic cement

Hybrid Cement

Image of cement particles at 500x magnification, using a scanning electron microscope

SCG
Portland Cement Type I
Innovative Cement for the Ultimate Structural Work

Product Information

- Portland cement Type I is ideal for concrete constructions requiring high strength such as estates, high-rise buildings, roads, expressways, stadiums, and airports. Also suitable for concrete products including foundations, columns, beams, and slabs.
- Cement bags feature a thin plastic lining to protect the cement from humidity and provide resistance to impact, maintaining the freshness of the cement.
- Available in 50 kg./bag.

Special Features

- Provides high compressive strength, resulting in strong and durable concrete construction
- Reduces greenhouse emissions in the production process, thereby posing no harm to the environment and providing an alternative for eco-conscious users
- Ideal for both prestressed and non-prestressed concrete prestressed

TIS 15 Part 1-2555

Recommendation

Concrete should be properly cured for at least 7 days with wet sacks or by water spray.

Certifications

- Attained the Thai Industrial standard for Portland Cement Type I
- Conforms with ASTM 150 Type I of the U.S.

Mix Design

Materials Volume Ratio	Cement	Fine Aggregates (Sand)	Coarse Aggregates (Gravel)	Water
Lean Concrete	1	3	5	1
Conventional Concrete	1	2	4	1 to

Remarks: 1. The concrete mix design may vary depending on individual project requirements under the supervision and recommendations of civil engineers.
2. The mixing and use of concrete may vary depending on individual project requirements under the supervision and recommendations of civil engineers.

ACCORDING TO THAI INDUSTRIAL STANDARD SPECIFICATION FOR PORTLAND CEMENT, TIS 15 PART 1-2555				TYPICAL TEST RESULTS
CHEMICAL REQUIREMENTS				
MAGNESIUM OXIDE (MgO)	Percent %	Max	6.0	1.15
SULFER TRIOXIDE (SO_3)	Percent %			
When 3CaO, Al_2O_3 is 8% or less	Percent %	Max	3.0	
When 3CaO, Al_2O_3 is more than 8%	Percent %	Max	3.5	3.1
LOSS ON IGNITION	Percent %	Max	3.0	2.1
INSOLUBLE RESIDUE	Percent %	Max	0.75	0.23
PHYSICAL REQUIREMENTS FINENESS, SPECIFIC SURFACE				
Air Permeability Test Average Value	cm^2/g	Min	2,800	3,360
SOUNDNESS				
Autoclave Expansion	Percent %	Max	0.80	-0.02
TIME OF SETTING				
Vicat Test				
Initial Set	Minutes	Min	45	101
Final Set	Minutes	Max	375	185
AIR CONTENT OF MORTAR	Percent % Volume	Max	12	8
COMPRESSIVE STRENGTH				
Mortar Cubes				
3 days	MPa	Min	12.0	24.3
7 days	MPa	Min	19.0	32.1

Remarks: The report of the analysis and test results was issued on May 7, 2014.

SCG

Portland Cement Type III or High Early Strength Cement

Innovative High Early Strength Cement

Product Information

- Portland cement Type III is ideal for the production of pre-stressed concrete products such as concrete planks, piles, and electrical poles.
- Cement bags feature a thin plastic lining to protect cement from humidity and provide resistance to impact, maintaining the freshness of the cement.
- Available in 50 kg./bag.

Special Features

- A faster rate of early high strength allows for faster work completion.

TIS 15 Part 1-2555

Recommendation

Concrete should be properly cured for at least 3 days with wet sacks or by water spray.

Certifications

- Attained the Thai Industrial standard for Portland Cement Type III
- Conforms with ASTM 150 Type III of the U.S.

Mix Design

Materials Volume Ratio	Cement	Fine Aggregates (Sand)	Coarse Aggregates (Gravel)	Water
Conventional Concrete	1	2	4	1 to 2

Remarks: 1. The concrete mix design may vary depending on individual project requirements under the supervision and recommendations of civil engineers.
2. The mixing and use of concrete may vary depending on individual project requirements under the supervision and recommendations of civil engineers.

ACCORDING TO THAI INDUSTRIAL STANDARD SPECIFICATION FOR PORTLAND CEMENT, TIS 15 PART 1-2555					TYPICAL TEST RESULTS
CHEMICAL REQUIREMENTS					
MAGNESIUM OXIDE (MgO)	Percent	%	Max	6.0	1.09
SULFER TRIOXIDE (SO_3)					
When 3CaO, Al_2O_3 is 8% or less	Percent	%	Max	3.0	
When 3CaO, Al_2O_3 is more than 8%	Percent	%	Max	4.5	3.6
LOSS ON IGNITION	Percent	%	Max	3.0	0.9
INSOLUBLE RESIDUE	Percent	%	Max	0.75	0.26
TRICALCIUM ALUMINATE (C_3A)	Percent	%	Max	15	8.69
PHYSICAL REQUIREMENTS					
SOUNDNESS					
Autoclave Expansion	Percent	%	Max	0.80	-0.03
TIME OF SETTING					
Vicat Test					
Initial Set	Minutes		Min	45	77
Final Set	Minutes		Max	375	100
AIR CONTENT OF MORTAR	Percent	% Volume	Max	12	9
COMPRESSIVE STRENGTH					
Mortar Cubes					
1 day	MPa		Min	12.0	22.5
3 days	MPa		Min	24.0	32.0

Remarks: The report of the analysis and test results was issued on June 9, 2014

SCG
Marine Cement

Innovative High-Strength Cement for Coastal Areas

Product Information

- Portland pozzolan cement is suitable for concrete construction exposed to a coastal environment or brackish areas where structures are exposed to sea aerosols,sea water, or brackish water. It also provides better resistance to corrosion as well as chloride and sulfate attack than Portland cement Type I.
- Cement bags feature a thin plastic lining to protect cement from humidity and provide resistance to impact, maintaining the freshness of the cement.
- Available in 50 kg./bag.

Special Features

- Provides high resistance chloride and sulphate attack
- Reduces greenhouse emissions in the production process, thereby posing no harm to the environment and providing an alternative for eco-conscious users. The concrete structure has at least 2 times longer useful life than a structure built using ordinary Portland cement.

TIS 849-2556

Recommendation

- Concrete should be properly cured for at least 7 days with sacks or by water spray.

Certifications

- Attained the Thai Industrial Standard for Portland Pozzolan Cement
- Conforms with ASTM C595 Type IP of the U.S.

Mix Design

Materials Volume Ratio	Cement	Fine Aggregates (Sand)	Coarse Aggregates (Gravel)	Water
High-Strength Concrete				Less than 25 liters

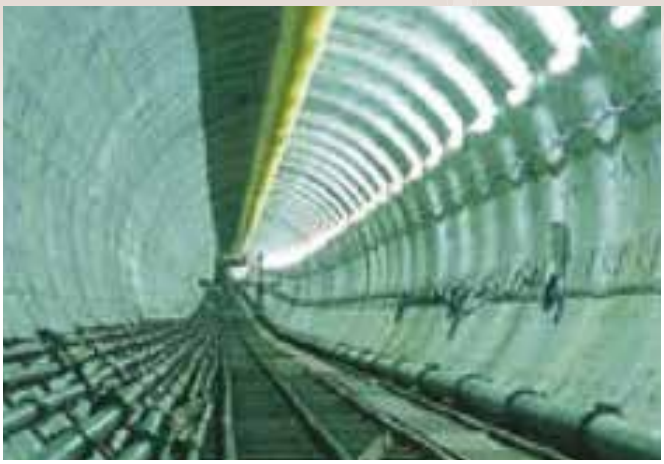
Remarks: 1. High-strength concrete has a lower water-cement ratio through the use of water reducers.
2. The concrete mix design may vary depending on individual project requirements under the supervision and recommendations of civil engineers.

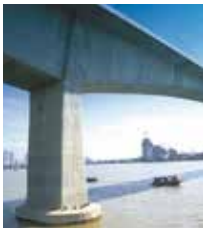
ACCORDING TO THAI INDUSTRIAL STANDARD SPECIFICATION FOR PORTLAND POZZOLAN CEMENT, TIS 849 - 2556				TYPICAL TEST RESULTS
CHEMICAL REQUIREMENTS		**TYPE IP**		
Magnesium Oxide (MgO)	Percent (%),	6.0	Max.	1.18
Sulfur Trioxide (SO_3)	Percent (%),	4.0	Max.	2.88
Loss on Ignition	Percent (%),	5.0	Max.	0.48
PHYSICAL REQUIREMENTS				
Blaine Fineness	cm^2/g	2800	Min.	4130
SOUNDNESS:				
Expansion	Percent (%),	0.5	Max.	-
Contraction	Percent (%),	0.2	Max.	0.03
TIME OF SETTING (Vicat test)				
Initial Set	Minutes	45	Min.	120
Final Set	Minutes	420	Max.	140
AIR CONTENT OF MORTAR	Percent (%),	12	Max.	8
COMPRESSIVE STRENGTH TEST:				
3 Days	Kgf/cm^2, (MPa)	133 (13.0)	Min.	270 (26.4)
7 Days	Kgf/cm^2, (MPa)	204 (20.0)	Min.	324 (31.8)

Remarks: The report of the analysis and test results was issued on July 3, 2014

SCG
Portland Pozzolan Cement

Innovative High-Strength Cement for Saline Soil in the Northeastern Area





Product Information

- Portland pozzolan cement is ideal for concrete construction exposed to saline soil in north eastern Thailand and in brackish areas.
- Cement bags feature a thin plastic lining to protect cement from humidity and provide resistance to impact, maintaining the freshness of the cement.
- Available in 50 kg./bag.

Special Features

- Provides high resistance to chloride and sulphate attack
- Reduces greenhouse emissions in the production process, thereby posing no harm to the environment and providing an alternative for eco-conscious users

TIS 849-2556

Recommendation

- Concrete should be properly cured for at least 14 days with sacks or by water spray.

Certifications

- Attained the Thai Industrial Standard for Portland Pozzolan Cement
  Conforms with ASTM C595 Type IP of the U.S.

Mix Design

Materials Volume Ratio	Cement	Fine Aggregates (Sand)	Coarse Aggregates (Gravel)	Water
High-Strength Concrete				Less than 25 liters

Remarks: 1. High-strength concrete has a lower water-cement ratio through the use of water reducers.
2. The concrete mix design may vary depending on individual project requirements under the supervision and recommendations of civil engineers.

ACCORDING TO THAI INDUSTRIAL STANDARD SPECIFICATION FOR PORTLAND POZZOLAN CEMENT, TIS 849 - 2556				TYPICAL TEST RESULTS
CHEMICAL REQUIREMENTS		**TYPE IP**		
Magnesium Oxide (MgO)	Percent (%),	6.0	Max.	1.18
Sulfur Trioxide (SO_3)	Percent (%),	4.0	Max.	2.88
Loss on Ignition	Percent (%),	5.0	Max.	0.48
PHYSICAL REQUIREMENTS				
Blaine Fineness	cm^2/g	2800	Min.	4130
SOUNDNESS:				
Expansion	Percent (%),	0.5	Max.	-
Contraction	Percent (%),	0.2	Max.	0.03
TIME OF SETTING (Vicat test)				
Initial Set	Minutes	45	Min.	120
Final Set	Minutes	420	Max.	140
AIR CONTENT OF MORTAR	Percent (%),	12	Max.	8
COMPRESSIVE STRENGTH TEST:				
3 Days	Kgf/cm^2, (MPa)	133 (13.0)	Min.	270 (26.4)
7 Days	Kgf/cm^2, (MPa)	204 (20.0)	Min.	324 (31.8)

Remarks: The report of the analysis and test results was issued on July 3, 2014

SCG
Precast Cement

Innovative Cement for Superb Quality Concrete Products








Product Information

- Portland cement Type I is ideal for the manufacture of precast concrete products such as pipes and blocks as well as for general structural work like estates and buildings.
- Cement bags feature a thin plastic lining to protect cement from humidity and provide resistance to impact, maintaining the freshness of the cement.
- Available in 50 kg./bag.

Special Features

- Provides strong and durable precast concrete work with smooth and beautiful finish
- Offers ease of use and quick removal of framework
- Ideal for both compressive and non-compressive concrete construction

TIS 15 Part 1-2555

Green Industry 5

Recommendation

- Concrete should be properly cured for at least 7 days with wet sacks or by water spray.

Mix Design

Materials Volume Ratio	Cement	Fine Aggregates (Sand)	Coarse Aggregates (Gravel)	Water
Lean Concrete	1	3	5	1
Conventional Concrete	1	2	4	1 to

Remarks:
1. The concrete mix design may vary depending on individual project requirements under the supervision and recommendations of civil engineers.
2. The mixing and use of concrete may vary depending on individual project requirements under the supervision and recommendations of civil engineers.

Major Projects Built with SCG Cement

SCG 100 Years Building

Siam Commercial Bank Head Office

Kasikorn Bank Head Office

Central Department Store (Chidlom Branch)

Dusit Thani Hotel

Numerous major infrastructures and renowned large high-rise buildings in Thailand have been built with "SCG Cement " including.

- Memorial Bridge
- Hua Lamphong Station
- Dusit Thani Hotel
- Central Department Store (Chidlom Branch)
- Don Muang Airport
- Suvarnabhumi Airport
- BTS (Elevated Skytrain)
- The MRT Chaloem Ratchamongkhon Line
- The Queen Sirikij National Convention Center
- United Nations Building
- The National Science Museum Building
- Assumption University (Bang Na)
- Chulalongkorn University (Faculty of Science Building)
- SCG Head Office 1, 2
- Baiyok Tower 1, 2
- Kasikorn Bank Head Office
- Siam Commercial Bank Head Office
- Siam Cemmercial Bank (Talat Noi Branch)
- Thai Wah Tower 1, 2
- Ocean One Tower Pattaya
- Muang Thong Thani Condomenium
- Rajamangala National Stadium
- Supachalasai Stadium
- Thammasat Stadium (Rangsit)
- Commemoration of Queen Sirikit Sports Stadium
- Khun Dan Prakan Chon Dam
- Kwai-noi Dam
- Kanchanapisek Bridge
- Bhumibol Bridge
- Thai-Lao Friendship Bridge
- Don Muang Tollway
- Burapha Withi Expressway (Bang Na-Bang Phli-Bang Pakong Expressway)
- First-Stage Expressway System
- Second-Stage Expressway System
- Third-Stage Expressway System
- Rama III Bridge
- Rama V Bridge
- Rama VII Bridge
- Rama VIII Bridge
- Rama IX Bridge
- SCG 100th Year Building

Recommendations

Recommendations for cement bag handling

- When lifting a cement bag, it is advisable to get down on one knee and pull the bag up the leg with the back upright. Children and pregnant women should not move cement bags without the proper equipment.

Precautions

- Exposure and inhalation of cement dust or cement mixtures may cause skin irritation.
- If it comes into contact with eyes, cement can cause irritation and damage to the eyes.
- Cement is not an edible product and should not be eaten.

Safety Guidelines

- Avoid inhalation of cement dust or direct contact between cement and the skin by wearing a standard dust respirator, goggles as well as water-proof clothing, shoes, and gloves.
- Wash eyes immediately with plenty of clean water if they come into contact with cement and consult a doctor.
- Wash mouth and skin immediately with plenty of clean water if they come into contact with cement.
- Where there are symptoms such as rashes and burns on the skin after exposure to cement, consult a doctor.
- Clothing contaminated by wet cement should be washed before use.
- Do not use cement bags to contain food and drink.
- Keep cement out of reach from children.

For further information, please contact
SCG Contact Center 02-586-2222
Email : contact@scg.co.th, www.scgbuildingmaterials.com

Catalogue Code
2015-SBE-C1-1
MSB-S-011