



Our Company

CMS Clinker Sdn Bhd is located on a 24.8 hectare site at Mambong, 28 km southeast of Kuching city, Sarawak. The plant consists of a raw mill for grinding, coal grinding facilities and kiln burning. Neighbouring the plant is CMS Clinker's own quarrying concessions of key raw materials - limestone, shale and sandstone - covering 78 hectares.

Incorporated in 1992, the Company began as Sarawak Clinker under the Sarawak Economic Development Corporation (SEDC). Its plant was commissioned in 1996 with a production capacity of 2,000 metric tones (MT) per day. This capacity was upgraded in 2004 to 2,400 MT per day. In November 2007, the Company which had since seen ownership by Indonesian and Filipino entities, was acquired by CMS Cement Sdn Bhd, a subsidiary of Malaysian public-listed conglomerate Cahya Mata Sarawak Berhad (CMS). January 2008 marked a new beginning for the Company when it changed its name to CMS Clinker. Its current production capacity is 2,500 MT per day or up to 800,000 MT per annum. CMS Clinker is the sole manufacturer of clinker in East Malaysia.

How We Work

We aim to realize our Vision by ensuring that our clinker manufacturing process attains the following:

- Quality Products & Services
- Conservation of the Environment
- Incorporation of best practices in Occupational Health & Safety (OHS)
- Compliance with environmental, OHS and other legislations & regulations
- Compliance with the requirements of QMS, EMS and OHSMS, and continuously improving their effectiveness

We firmly believe these can be achieved through:

- Producing consistent quality clinker
- Identifying, satisfying & exceeding our customer's needs
- Minimizing material waste & wastage
- Reducing dust & noise emissions
- Eliminating / mitigating causes of accidents & occupational disease
- Nurturing & instilling safety awareness amongst our employees



Our Facilities

- Limestone, Shale & Sandstone concessions in the vicinity of the Plant
- Limestone crusher plant
- Combined storage hall
- Boom stacker
- Reclaimer
- Raw Mill
- Coal Mill
- Kiln
- Grate cooler
- Silos (2 X 2500 MT and 1 X 15,000 MT capacity)
- A cost effective underground water cooling system, complete with a 33 kV PDS sub-station & fire hydrants
- Philips XRF Spectrometer & PARR Bomb Calorimeter to monitor raw materials, fuel & product quality



CLINKER

is the main raw material in the manufacture of cement

Product Specs

SiO ₂	=	min 21.50 %	Cl	=	max 0.10 %
Fe ₂ O ₃	=	max 4.00 %	IR	=	max 0.50 %
Al ₂ O ₃	=	max 6.00 %	Free Lime	=	max 2.00 %
CaO	=	min 65.00 %	Total Alkali	=	max 0.90%
MgO	=	max 3.00 %	LSF	=	min 0.90 %
SO ₃	=	max 0.90 %	C ₃ S	=	min 48.00 %
LOI	=	max 1.00 %	C ₂ S	=	max 10.00 %
Na ₂ O	=	max 0.40 %	C ₃ A	=	max 12.00 %
K ₂ O	=	max 0.70 %	C ₄ AF	=	max 13.00 %

The clinker produced is suitable for the manufacture of cement in compliance with Malaysian Standard MS 522 and other equivalent standards.

Contact Us



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CMS CLINKER

How is CLINKER manufactured?



Raw Material → Grinding → Burning → Product

Step 1: Quarrying

Limestone, shale and sandstone form the main raw materials to manufacture clinker. For CMS Clinker, all three materials are quarried within its plant at Mambong, ensuring a continuous supply of quality raw materials.



Step 2: Crushing & Storage of Raw Materials

Different crushers are used for the three raw materials to obtain aggregates of less than 25 mm in size - limestone is crushed by a hammer crusher, shale is put through a roller crusher and sandstone is crushed by an impact crusher. The resulting crushed materials are then stored in silos and storage halls.



Step 4: Pre-Grinding & Grinding

This next step involves a further reduction in size of the raw mix, limestone and iron ore components. These raw materials are ground with a hammer mill and two other ball mills to achieve an 82% passing rate through a 75 micron sieve. The resulting fine **raw meal** powder is then blended in the blending silo and pumped to a pre-heater. The coal used as fuel for the furnace is also ground using a ball mill to a fine powder called **kiln feed** which has an 80% passing rate through a 90 micron sieve.

Step 3: Mixing & Pre-Homogenising

Limestone (making up 78% of the raw material), shale (12%) and sandstone (10%) are mixed together and pre-homogenised using a boom stacker. This process results in **raw mix**. A reclaimer is then used to transfer this raw mix onto a conveyor to storage.

Step 5:

Pre-heating & Burning

The fine powdered **raw meal** and **kiln feed** are fed to the 5-stage pre-heater and kiln. Here, the **clinkering process** happens:

Temperature	Process
70 – 100°C	Drying
100 – 750°C	Pre-heating
750 - 1000°C	Calcination
1000-1500°C	Clinkering



Step 6: Cooling & Storing

From the kiln, the hot clinker is cooled to a temperature of 120°C at the **grate cooler** which uses seven cooling fans. The clinker is further crushed to smaller balls of less than 25 mm diameter in size using a hammer crusher before being transferred using the bucket conveyor system to the **clinker silo**.

Step 7: Delivery

CMS Clinker has the capacity to deliver 2,500 MT per day of clinker.



CLINKER PROCESS FLOW CHART

