



# MARINECEM

LOW HEAT, SULFATE RESISTANCE BLAST FURNACE CEMENT



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#### Disclaimer clause

The information given is of general nature and does not address the specific circumstances of any particular situation. The guidance is given with the best intention, however, nothing in this brochure shall create or be deemed to create any obligations, whether expressed or implied on YTL Cement Marketing Sdn Bhd. Users are advised to carry out their own tests in order to ascertain the performance and suitability of the product for their particular project.

# MARINECEM

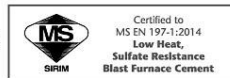
LOW HEAT, SULFATE RESISTANCE BLAST FURNACE CEMENT (MS EN 197-1:2014 CEM III/B 32.5N - LH/SR)



MARINECEM is the brand name of a Low Heat (LH), Sulfate Resistance (SR) Blast Furnace Cement specially formulated for low heat and sulfate resistance applications. The use of MARINECEM will ensure the durability of structures in which low heat, sulfate resistance and chloride resistance are required, in line with stipulations in BS 8500-1 & 2 (MS 523-2 & 3).

## CERTIFICATIONS

MARINECEM is certified to MS EN 197-1:2014 CEM III/B 32.5N-LH/SR



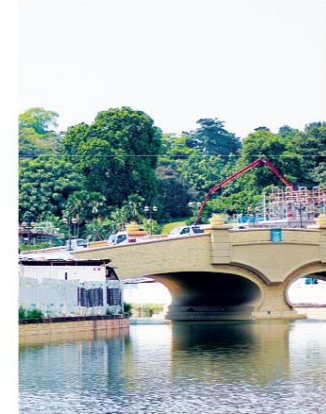
## APPLICATIONS

MARINECEM is suitable for construction in marine environment as well as for structures that require high sulfate resisting properties.



## PROPERTIES

Tests	Units	Specification MS EN 197-1:2014	Test Results
<b>Chemical Composition</b>			
Sulfate Content (SO <sub>3</sub> )	%	4.0 max.	2.1
Loss On Ignition (LOI)	%	5.0 max.	0.2
Insoluble Residue (IR)	%	5.0 max.	0.1
Chloride (Cl <sup>-</sup> )	%	0.10 max.	0.01
<b>Physical Properties</b>			
<b>Compressive Strength</b>			
Mortar Prisms	7 days	MPa	16 min. 19.5
(1:3:0.5)	28 days	MPa	32.5 ≤ x ≤ 52.5 40.0
Setting Time	Initial	mins	75 min. 400
Soundness		mm	10 max. <1



Reduction in CO<sub>2</sub>

## ENVIRONMENTAL BENEFITS

MARINECEM is produced using the most advanced energy efficient cement production process. Every effort has been made to reduce the environmental foot print during the production of this product. The use of high quality blastfurnace slag to replace a portion of the clinker also served to reduce the embodied CO<sub>2</sub> of the product.

## AVAILABILITY

MARINECEM is packed in 50kg paper bag and is available from YTL Westport & Pasir Gudang cement plants.

## RECOMMENDED MIX PROPORTIONS

Concreting (30 MPa)  
• Batching by wheelbarrow

MARINECEM	Coarse Sand	Stone	Approximate Yield
2 Bags (1=50kg)	2 Wheelbarrows	2 Wheelbarrows	0.22m <sup>3</sup>

## QUALITY ASSURANCE

MARINECEM is produced under stringent quality assurance, environmental management, health & safety and energy management systems. It is certified to MS ISO 9001, MS ISO 14001, OHSAS 18001 & MS ISO 50001.

### HEALTH AND SAFETY

Skin contact with wet cement, fresh concrete or mortar may cause irritation dermatitis or burns. It is recommended to use Personal Protective Equipments which include eye, hand, skin protection and dust masks. First aid treatment should involve the immediate bathing of the affected area with water.

