Taman Seri Residensi, Sungai Kapar Indah, Klang, Selangor. Protected by realcolor® Primero.

STEEL IT RIGHT

Choose the right steel that suits your operational environment with CSC Steel realcolor®

Structural steel has become one of the most prevalent building materials available in the market today, and is considered an important component in the construction of modern structures including residential houses, commercial and industrial buildings. The versatility, sustainability and flexibility of structural steel are some of the main reasons for its use, as well as being a very cost-effective building material. In construction projects, the common applications of structural steel include frame structure, wall cladding and roofing profile.

In creating impressive and long-lasting buildings, structural steel is typically produced with a special coating to protect the metal as well as to reduce wear and tear. The type of coating to apply is determined by the end use of the product, and your operational environment.

This is especially important for CSC Steel when producing its extensive range of products, which include pickled and oiled steel coils (PO), cold rolled steel coils (CR), galvanized steel coils (GI) and pre-painted steel coils (PPGI). The Taiwanese-owned steel producer is also actively shaping its brands, one of which is **realcolor®**, to further expand its market share in the building material industry.

CSC STEEL realcolor®

CSC Steel's realcolor® consists of three range of products – Supreme, Thermoshield and Primero – each catering to different types of operational environment. realcolor® Thermoshield and realcolor® Supreme have obtained the SIRIM certification ISO 9223 under C-5I (Industrial) and C-5M (Marine) categories, the only steel products with the highest anti-corrosion rating available in the Malaysian market to date.

The obtained SIRIM certification is based on MS 2383:2011, which specifies and defines the anti-corrosion performance of pre-painted metal sheet into five categories in reference to the principle ISO 9223 environmental corrosiveness guidance. The range of corrosion categories relative to CSC Steel's brand includes:

CATEGORY	DESCRIPTION	CORROSION RATE (µm/y)	TYPICAL ENVIRONMENTS	CSC STEEL'S BRAND		
				Supreme realcolor®	Thermoshield realcolor®	Primero realcolor®
C-5M	Very high – geothermal, marine	80 - 200	Coastal and offshore areas with high salinity and exposed areas along the coastline.	✓		
C-5I	Very high – industrial	80 - 200	Industrial area with high humidity and very high industrial pollution.	✓	✓	
C4	High or Tropical	50 - 80	Industrial areas and coastal area with high pollution and moderate salinity.	✓	✓	✓
C3	Medium	25 - 50	Urban areas and industrial atmosphere with moderate pollution. Coastal area with low salinity.	✓	✓	✓
C2	Low	1.3 - 2.5	Atmosphere with minimum pollution, very low humidity (rural areas).	✓	✓	✓
C1	Very low	< 1.3	Dry zone with very low pollution and humidity.	✓	✓	✓

Source: www.steelconstruction.info | www.sirim.my | www.jsm.gov.my

ISO 9223 specifies the key factors in the atmospheric corrosion of metals and alloys. These are the temperature-humidity complex, pollution by sulphur dioxide and airborne salinity[1]. Corrosion rates can vary within a given local environment due to effects of sheltering, prevailing winds and etc; therefore, it is the 'micro-climate' immediately surrounding the building that determines its corrosion rate.

Some types of buildings may fall into one or a combination of the above categories depending on their location, design and construction. For instance, hospital buildings are typically in C1 category but may contain kitchen and laundry areas that are classified as C3.

C5 category is especially for buildings that are situated in high industrial areas with high humidity and aggressive atmosphere (C-5I category) or coastal areas with high salinity (C-5M category), which also have interior areas with almost permanent condensation and high pollution. ISO 9223 gives dose-response functions for normative estimation of the corrosivity category based on the calculated first-year corrosion loss of standard metals. This means that buildings in C-5I and C-5M categories would experience steel thickness loss of 80 – 200µm per year.

While the lifespan of a commercial structure on average ranges from 50 to 60 years, it can go further when the right building material is used in its construction. For buildings built and operating in C-5I and C-5M categories, this means choosing the right structural steel that suits your operational environment.

CHOOSE THE RIGHT realcolor® FOR YOUR BUILDING

realcolor® SUPREME – Your ultimate selection against weathering

realcolor® Supreme provides superb performance for roofing and wall cladding in harsh environment. The top-liner comprises Hynar/Kylar-certified PVdF coating, which is known as the only SIRIM-certified C-5M roofing material in the Malaysian market. It contains more than 70% Polyvinylidene Flouride (PVdF) binder that offers a unique combination of excellent outdoor durability, UV protection, formability and chemical resistance. It provides supreme resistance to corrosion, weather conditions and chemical exposure, as well as superb performance of high thermal stability and excellent formability.

realcolor® THERMOSHIELD- Stay cool always. Be clean. Be durable

realcolor® Thermoshield is a cool roof system that provides excellent heat reflection and thermal control. This pre-painted galvanised steel can retain its glossiness and colour vibrancy longer, improves aesthetic and clean exterior for roofing and cladding in industrial, residential and commercial buildings. It is one of the greenest building materials with no hazardous substances, fully compliant to the latest RoHS and Uniform Paint Standard with routine accredited lab test – thus, the perfect choice for protection against harsh weather conditions and highly corrosive environments.

realcolor® PRIMERO- High performance polyester coated galvanised steel

realcolor® Primero is one of the most versatile materials suitable for tropical and higher corrosion rate environment with up to C4 rating as certified by SIRIM. It can satisfy most common roofing and cladding application with its excellent surface hardness and flexibility, optimum durability and good formability as well as optimal colour selection.

[1]https://www.iso.org/standard/53499.html

Sunway Big Box Retail Park, Sunway Iskandar, Nusajaya, Johor. Protected by realcolor® Supreme.

Jimah Power Plant, Port Dickson, Negeri Sembilan. Protected by realcolor® Supreme.

MISC Integrated Logistics, Port Klang, Selangor. Protected by realcolor® Thermoshield.