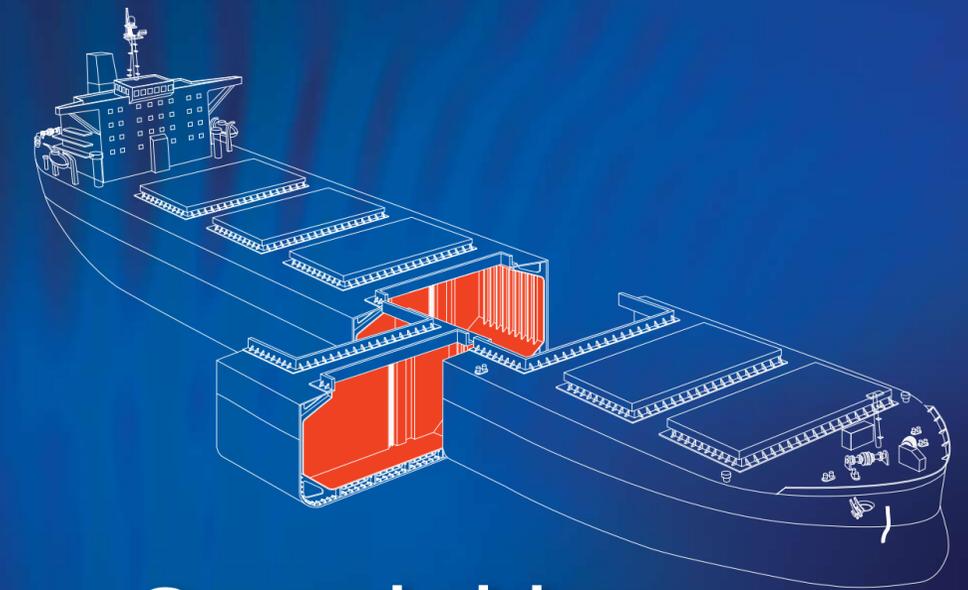




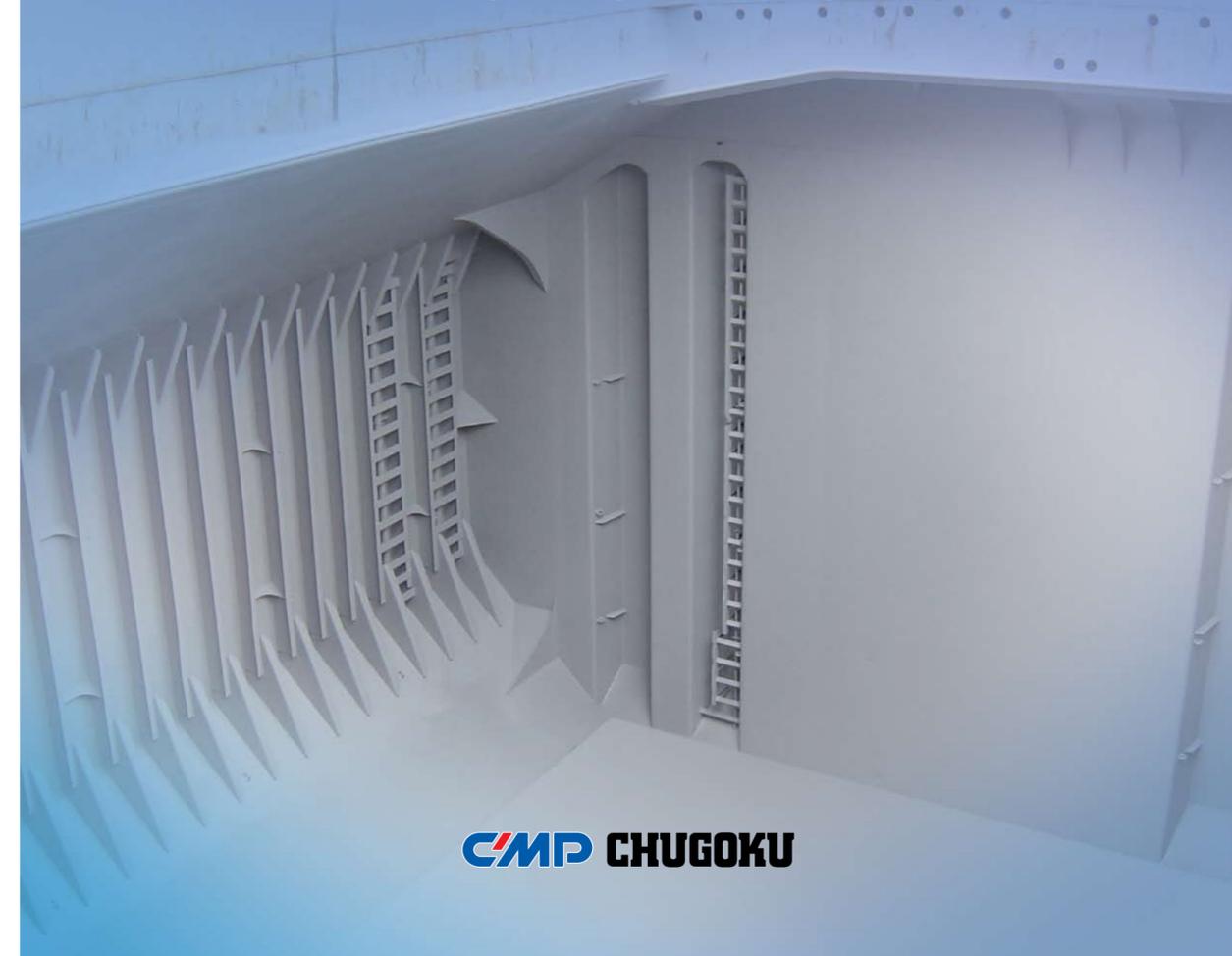
## Cargo hold coatings

A comprehensive range of cargo hold coatings for bulk carriers



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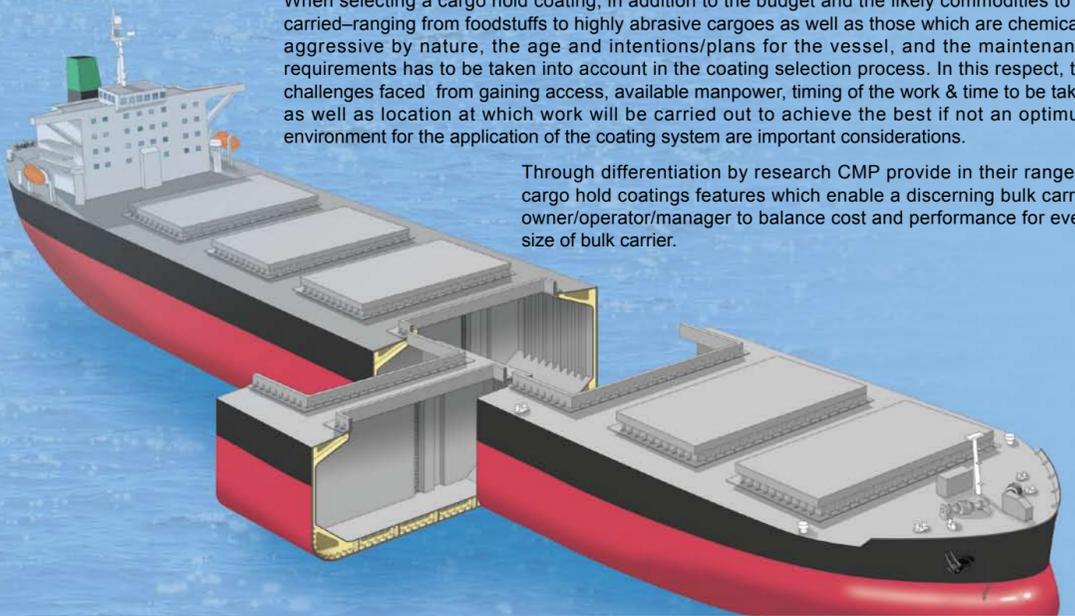
**CMP CHUGOKU**

A comprehensive range of cargo hold coatings for bulk carriers

# Cargo hold coatings

High performance cargo hold coatings are demanded and essential these days to satisfy the rigorous demands on hold/coating condition and at the same time minimise maintenance costs and enable smooth operations.

When selecting a cargo hold coating, in addition to the budget and the likely commodities to be carried—ranging from foodstuffs to highly abrasive cargoes as well as those which are chemically aggressive by nature, the age and intentions/plans for the vessel, and the maintenance requirements has to be taken into account in the coating selection process. In this respect, the challenges faced from gaining access, available manpower, timing of the work & time to be taken as well as location at which work will be carried out to achieve the best if not an optimum environment for the application of the coating system are important considerations.



Through differentiation by research CMP provide in their range of cargo hold coatings features which enable a discerning bulk carrier owner/operator/manager to balance cost and performance for every size of bulk carrier.

## FOOD CONTACT

The majority of cargo hold coatings have been assessed for contact with foodstuffs, which are used for direct human consumption or human contact. All CMP hold coating systems meet the requirements outlined in the Code of Federal Regulation (CFR) of the Food and Drug Administration (FDA) in the U.S as well as meeting the European requirements, from assessment at independent European test organisations.

## RESISTANCE TO BULK CARGOES

The CMP range of cargo hold coatings is designed to accommodate a wide variety of cargoes. A bulk cargo resistance list is available.

## HIGH SOLIDS - LOW VOLATILE ORGANIC CONTENT (VOC)

Low VOC coatings are designed to minimise health hazards during application, whilst providing good adhesion and anti-corrosive performance. The CMP Cargo hold range includes some of the lowest VOC's available.

## EASE OF CLEANING

Cargo hold coatings can suffer staining on the surfaces from contact with certain cargoes. The Coating surfaces in the CMP Cargo hold range have consequently been formulated to assist/enable ease of removal of stains and contaminations by a cleaning process.

## LIFE EXTENSION

Cargo hold coatings can sustain a lot of damages from loading and discharging operations due to mechanical damage. Use of the highly abrasion resistance coatings in the CMP range can extend a special survey, providing longer life and minimising maintenance costs during the in-service period.

## TIME OF LOADING FIRST CARGO (After application of the coating system)

This is an important factor in order to establish when a cargo hold coating can enter into service after a coating application. Each product in the CMP cargo hold range has been assessed to establish this parameter. As well as a table showing the time required following a full application of a cargo hold system. Time to loading cargo after a touch up is mentioned in the CMP cargo hold data.

## Cargo hold coating range

	UMEGUARD EG	UMEGUARD SX HS	BANNOH 1500	UMEGUARD SUPER H	EVAMAX 2000 F
Durability	Good	Good	Very good	Excellent	Exceptional
Food contact	FDA	FDA	FDA	FDA	FDA
Hardness (ASTM D3363) 20 °C, 14 days	H	H	2H	Up to 4H	4H
VS(%)	82	77	73	75	78

- Notes.
1. Higher pencil hardness value is related to higher abrasion resistance of the coating system.
  2. For suitable dry cargoes, see the bulk cargo resistance list.
  3. UMEGUARD SUPER H, BANNOH 1500 and UMEGUARD SX HS are all available in Quick Drying versions (QD), see relevant technical data sheets. EVAMAX 2000F can be applied under all climate conditions.
  4. BANNOH 1500 is used as a standard epoxy hold coating system in Newbuilding projects.

## Cargo suitability

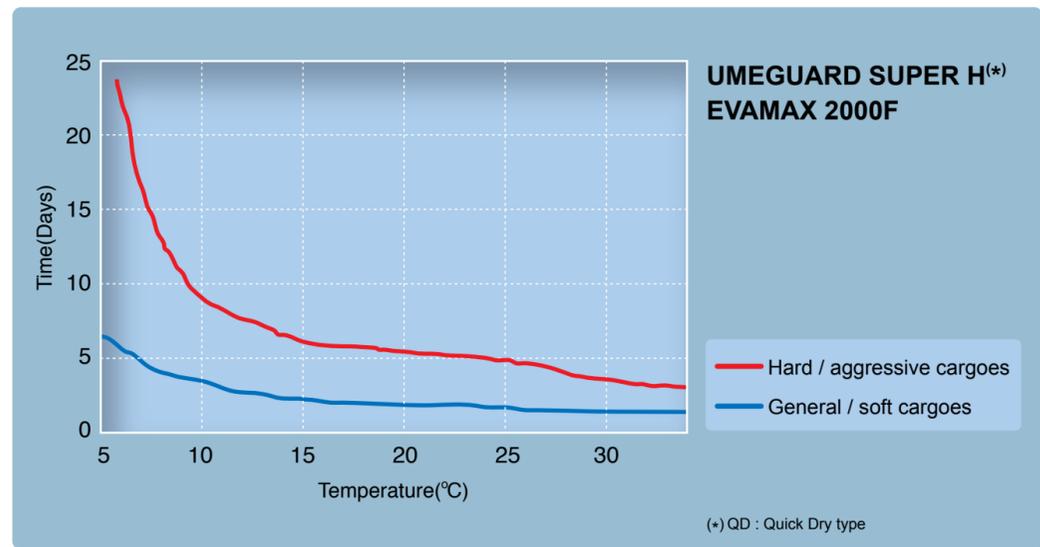
### General / soft cargo



### Hard / aggressive cargo



## Time to Loading First Cargo (Major Refurbishment)



## Performance

Shooter damage	Conventional epoxy	EVAMAX 2000F
	Damages	No damages
Mechanical damage	Conventional epoxy	UMEGUARD SUPER H
	Damages	No damages