

# PPG SIGMASHIELD™ MTC system

High performance coating system for dry cargo holds

Our unique coating technology delivers industry leading mechanical, thermal, chemical and anticorrosive performance at 2x100 microns.



# Industry leading mechanical, thermal, chemical and anticorrosive properties



PPG SIGMASHIELD MTC system is built on a unique coating technology that comprises a primer (PPG SIGMASHIELD PRIME) and topcoat (PPG SIGMASHIELD MTC).

This smart system for dry cargo holds has a unique chemistry that maximizes technical performance and offers a commercially sound solution for spot and full repairs. Its robust properties make it the ideal coating for premium performance in new construction applications.

## Benefits of the PPG SIGMASHIELD MTC system

- Unique coating technology maximizes technical performance at 2x100 microns
- Strong mechanical properties so that the coating can withstand the impact and constant abrasion of heavy, dense cargoes such as iron ore
- Excellent thermal resistance allowing transport of self-heating cargoes conform the IMSBC code
- Outstanding chemical resistance so that the widest possible range of active cargoes can be carried
- Robust, long-term protection against corrosion
- Efficient installation from surface tolerant molecular design
- Easy cleaning of the coating speeds up pre-loading inspections
- Fast return to service from kick start cure technology

## Unique chemistry delivers best-in-class performance

The PPG SIGMASHIELD MTC system utilizes unique chemistry consisting of a pre-reacted amine in the hardener of the coating. This has the effect of “kick-starting” the curing of the coating and results in curing time and return to service that are among the fastest in the industry.

The amine hardener has pre-polymers in the molecular design that boost the adhesive power of the binder system. This results in best-in-class anticorrosive properties when applied on steel. When applied on existing systems this offers enhanced surface tolerance.

The solid epoxy used in the binder matrix delivers a temperature tolerant system. From this outstanding mechanical, thermal and chemical resistance is provided as well as excellent surface hardness for easy cleaning and successful pre-loading inspections.

Our unique chemistry in the PPG SIGMASHIELD MTC system delivers optimized performance at two coats of 100 microns (4 mils). After application the vessel can resume service in just two days when transporting iron ore cargo and five days when carrying hot coal.



Maximized performance at 2 layers of 100 microns (4 mils)

## Maximum flexibility for cargo switching

The careful selection of inert raw materials in the formulation of the PPG SIGMASHIELD MTC system ensures that any unwanted chemical reactions are avoided and as such the system delivers excellent chemical resistance, allowing safe operation with all IMSBC cargoes and more.

## Best-in-class abrasion and corrosion control

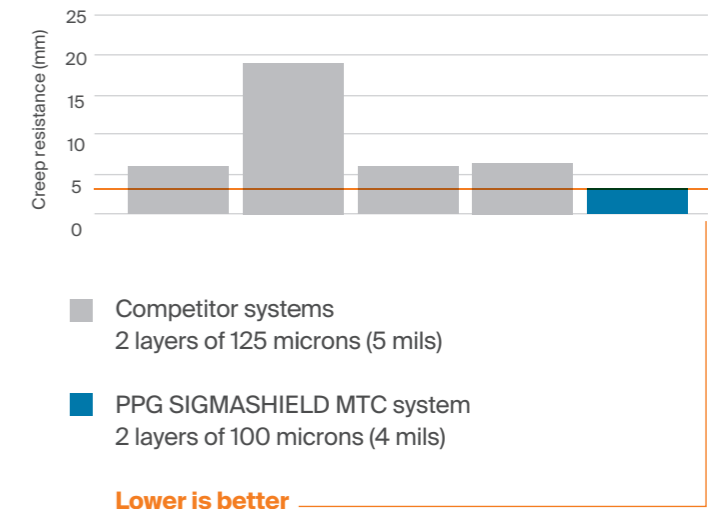
The system's excellent anti-abrasive and anticorrosive properties extends the service life of vessels and is effective across a wide range of operating temperatures due to its high glass transition epoxy matrix. As a result, damage commonly caused by cargo settlement during vessel operation is minimized.

The surface wetting properties built into the amine hardener provide excellent adhesion, anticorrosion and creep resistance. So when inevitable mechanical damage eventually does occur, the area affected remains limited and so extends the service life of the coating.

The system has undergone extensive tests in controlled situations designed to mimic actual practice. When applied in enclosed environments containing various chemically active cargoes and subjected to temperature cycles in the presence of moisture, it was found that PPG SIGMASHIELD PRIME was the best-in-class primer, exhibiting the smallest undercreep (similar to that of a water ballast tank coating system).

The below benchmark test results show that the PPG SIGMASHIELD MTC system outperforms competitor higher thickness coating systems.

## Salt spray test of system after 2,240 hours





Visit [ppgpmc.com](http://ppgpmc.com) or contact:

Asia Pacific ☎ +86-21-6025-2688 ✉ [ppgpmc.ap@ppg.com](mailto:ppgpmc.ap@ppg.com)

Europe, Middle East and Africa ☎ +32-3-3606-311 ✉ [customers@ppg.com](mailto:customers@ppg.com)

Latin America ☎ +57-1-8764242 ext. 201 ✉ [ppgpmcandean-ca@ppg.com](mailto:ppgpmcandean-ca@ppg.com)

North America (US & Canada) ☎ +1-888-9PPGPMC ✉ [PMCMarketing@ppg.com](mailto:PMCMarketing@ppg.com)



We protect and  
beautify the world™

No rights can be derived from the content of this publication. Unless otherwise agreed upon in writing, all products and technical advice are subject to our terms of sale, available on our website [ppgpmc.com](http://ppgpmc.com). All rights reserved. The PPG logo, We protect and beautify the world, and all other PPG marks are property of the PPG group of companies. All other third-party marks are property of their respective owners. P491-GLOB. Created May 2016. © 2016 PPG Industries, all rights reserved.