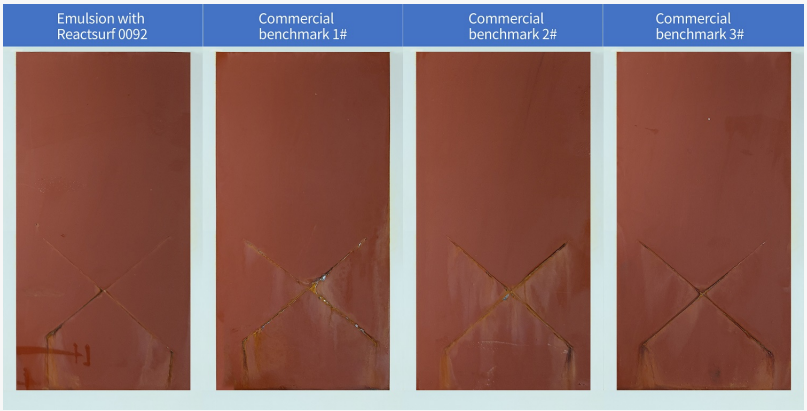
Solvay launches reactive waterborne emulsifier for solid epoxy resins

Worldwide environmental limits on emissions and regulatory requirements are driving the development of water-based coating technologies



After 500 hours salt spray test (ASTM B-117) on cold rolled steel plate, epoxy emulsion paint with Solvay's Reactsurf® 0092 and high pigment volume concentration (PVC) shows better corrosion resistance than all benchmarks. Photo: Solvay

BRUSSELS, BELGIUM, November 17, 2021 /EINPresswire.com/ -- Solvay has developed Reactsurf® 0092, an alkylphenol ethoxylates-free (APE) and non-ionic reactive water-based emulsifier for solid epoxy resins mainly for use in industrial coatings and paints or binders.

Solvay's unique and versatile Reactsurf® 0092 technology allows for the formulation of high-performance waterborne epoxy-based coatings which can match or exceed that of solvent-based (SB) coatings but with an appreciably lower level of volatile organic compounds (VOCs). Solvay is continuously developing and supplying products to meet the sustainable development challenges and regulatory requirements its customers are facing today and tomorrow for cleaner, healthier paints, and coatings formulations.

The new, cost-effective, environmentally and processing friendly emulsifier offers easy handling by combining both characteristic external and internal emulsification phases with no additional chemical modification required.

"Solvay's Reactsurf® 0092 emulsifier incorporates a highly reactive functional cross-linking group, a perfect balance and synergy between emulsification and epoxidation to achieve a highly reactive emulsifier," said Dr. Rong Er Lin, Research & Innovation Manager, Solvay Novecare Coatings Asia-Pacific. "This offers good particle size control for optimum emulsion coalescence and consistency without reduction in strength and provides excellent application performance and emulsion stability of paints and coatings."

Waterborne epoxy emulsions which incorporate Solvay's Reactsurf® 0092 exhibit excellent

freeze-thaw (F/T) resistance and are still flowable under -10°C (14°F) at up to 5 F/T cycles. Results of salt spray tests (ASTM B-117) on cold steel rolled (CRS) plates coated with epoxy emulsion paint with both high and low pigment volume concentrations (PVC) display a combination of high corrosion resistance, superior wet-adhesion, and no peel off, contrary to test benchmarks. Additional characteristics such as MEK (methylethylketone) Rub Test (ASTM D5264), impact resistance and pendulum hardness are equivalent to conventional waterborne epoxy coatings but with the significant benefit of very low VOCs.

High-performance waterborne epoxy resin paints and coatings are used in a wide variety of end-use industrial applications such as railway freight and passenger rolling stock, rail tracks and fittings, storage tanks, shipping containers, pipes, and structural steelwork.

To learn more about Reactsurf® 0092 contact our experts.

® Reactsurf is a registered trademark of Solvay

About Solvay
Solvay is a science company whose technologies bring benefits to many aspects of daily life. With more than 23,000 employees in 64 countries, Solvay bonds people, ideas and elements to reinvent progress. The Group seeks to create sustainable shared value for all, notably through its Solvay One Planet plan crafted around three pillars: protecting the climate, preserving resources and fostering a better life. The Group's innovative solutions contribute to safer, cleaner, and more sustainable products found in homes, food and consumer goods, planes, cars, batteries, smart devices, health care applications, water and air purification systems. Founded in 1863, Solvay today ranks among the world's top three companies for the vast majority of its activities and delivered net sales of €9 billion in 2020. Solvay is listed on Euronext Brussels and Paris (SOLB). Learn more at www.solvay.com.

Jun Wu
Solvay
+86 138 1266 6188
Jun.wu1@solvay.com
