

Product Presentation

Title of the lecture:

Sustainable and productive solutions for Industrial Metal

Subject classification:

- Coating raw materials
- Printing ink raw materials
- Adhesive raw materials
- Intermediates for construction chemicals
- Laboratory and production equipment
- Testing and measuring equipment
- Application
- Environmental protection and safety at work
- Services

Name and contact of the speaker:

Salutation: Mr.

First name: Ap

Surname: Heijenk

Tel: +31 6 1288 2630

E-Mail: ap.heijenk@covestro.com

Function: Application Development Manager Industrial Metal & Plastic, ACE & Transportation

Abstract (please in 1nglish language only):

In a world of growing competition, rising customer demands, and accelerated production processes, paint and coatings manufacturers must work harder than ever to keep up. More than ever, end-customers are looking for coating solutions that are quick to apply, fast-drying, and that speed up overall production. This presentation highlights three different approaches based on Covestro's portfolio to address this increasing demand: Firstly, we will showcase our new water based acrylic dispersion for direct-to-metal (DTM) application NeoCryl® XK-117/1. By eliminating the need for primers on metal substrates, DTM applications simplify and speed up the coating process – allowing more coat jobs per day, reducing labor costs, and driving competitiveness. NeoCryl® XK-117/1 offers a fast-drying, high-gloss system with excellent corrosion resistance. Second approach follows high solid systems to reduce energy consumption for curing process: 2K high solids solutions typically require forced drying conditions to speed up the drying process. Covestro's modified-acrylic Hybrane™ resins' unique chemical properties allow paint manufacturers to easily optimize their processes and operations. Because of the faster physical and chemical drying possibilities, the total cycle time can be reduced by approximately 20% under standard forced drying conditions, consequently driving throughput and ultimately revenues. What's more, these modified-acrylic Hybrane™ resins' lower curing temperature of 40°C – compared to the 60°C of typical high solid acrylics – enables up to 48% less energy consumption, leading to both lower energy costs and a reduced carbon footprint. Another 2K high solids solution is based on Covestro Pasquick® Technology. The unique reactivity of aspartics with aliphatic polyisocyanates makes their reaction kinetics more independent of temperature than is the case with conventional 2K high solids coating technologies. In practice, this means that no oven is required to obtain fast cure properties, and these polyaspartic coatings contribute significantly to reducing energy costs and CO₂ emissions – both factors of increasing importance. To further reduce the product carbon footprint, the entire polyaspartic Desmophen® CQ NH portfolio of Covestro contains a specified amount of bio-based raw materials: 29% - 38%, depending on the grade. Additionally, to further decrease the product carbon footprint of both the modified-acrylic Hybrane™ technology and the Pasquick® technology, these grades can be combined with partly bio-based Desmodur® CQ polyisocyanate crosslinkers. These innovative solutions demonstrate Covestro's commitment to providing productive and sustainable solutions for industrial metal coatings, addressing the industry's needs for efficiency, performance, and environmental responsibility.