



Technical Bulletin

#112

Armor Wrap® Paper White Particles

Armor Wrap® VCI Papers

Armor Wrap® papers are a line of corrosion inhibiting papers for the protection of various metals. The papers are neutral pH, natural Kraft papers, that are impregnated on both sides with ARMOR's proprietary Vapor and Contact Corrosion Inhibitor (VCI) nano-technology. The paper itself is the carrier of the corrosion inhibiting chemical to the metal product in a clean, easy and efficient form. Armor Wrap® papers are designed to be replacements for messy and sometimes hazardous liquid chemicals, oils and greases. ARMOR has been producing Armor Wrap® papers for more than thirty years.

White Particles on Paper

Armor recently ran an extended trial with an alternate grade of Kraft paper for VCI applications. The trial grade offered improved cost effectiveness, better porosity for VCI release, and increased recycle content. The paper ran very well with excellent coating consistency and very good VCI loading. The final coated appearance was excellent as well and all testing confirmed the performance to be consistent with our existing grades of Armor Wrap® papers. However, over time, as this paper grade absorbs moisture, excess VCI blooms to the surface giving a white powdery appearance. In many cases, the paper is used prior to this phenomenon occurring. In some applications, however, especially in packaging conditions where high moisture is present, the white particles are more noticeable.

Performance of Armor Wrap® Papers

This phenomenon is purely cosmetic in nature and extensive testing has confirmed the corrosion inhibiting performance of the paper is not affected. The migration of VCI out of the paper, as it absorbs moisture, is part of the design intent of VCI Kraft paper. Due to the natural variation in the paper the white powder can bloom to the surface in a varying pattern which is more noticeable with this particular grade. While the inconsistent pattern appears to be a coating issue, it is not and it is simply a natural paper variation. However, due to the cosmetic changes that this new paper grade has caused, ARMOR has stopped trialing this particular paper grade. You may see some of this paper currently in the system. Should customers have concerns due to the cosmetics of the white particles, please refer them to this technical bulletin. Should you need further information, please contact ARMOR Protective Packaging's Technical Services Department.

Published by: ARMOR Protective Packaging Technical Services, April 27, 2010

F:Product Standards/Technical Bulletins