



Flexipol DMP-20

Blocked Isocyanate Cross-linking Agent

Overview

- Aqueous, blocked isocyanate (BI) cross-linking agent
- Designed to un-block/cross-link at specific temperatures/times
- Improves the wash and dry-clean fastness of DWR and Soil Release finishes
- Formaldehyde-free, does not discolor or stiffen hand of finished textiles

Applications

- Extending and improving durability of DWR finishes
- Coatings for improved resistance to chemical and environmental attack
- Cross-linkable dispersions in aqueous pad applications for improved durability
- Coatings with enhanced lamination adhesion
- Woven and nonwoven fabrics finished for improved resistance to blood and saline penetration

Technical Information

Flexipol DMP-20 is a blocked isocyanate (BI) product that can be used as a latent cross-linking agent and/or adhesion promoter in industrial coating applications designed to unblock at specific curing temperatures to react fully with other functional co-binders in coating formulations.

Applications include surface coatings, aqueous water-repellent garment, textile and leather finishes, composites, adhesives, and sealants. Other applications include electrostatic spraying, curtain and coil coating, electrodeposition and other manufacturing techniques employing a heat curing cycle.

Formulary

In Textile pad/dry/cure applications for soil release or durable water repellency (DWR) finishing, the typical use level of Flexipol DMP-20 is at approximately 20% of the soil release or DWR agent pad-bath charge, or 10-20% of the pad solution.

To achieve full cross-linking activity, dry/cure at 150-160°C for 3-4 minutes, or 170-180°C for 20-40 seconds total dwell time. Pre-trial optimization is recommended.

Typical Properties

PROPERTY	VALUE
Appearance	Slightly hazy to hazy, translucent, colorless to tan emulsion
Odor	Mild
Ionic character	Nonionic
Water solubility	Dispersible
Viscosity @25°C (Brookfield), MPa·s/cps	<1000
Total solids, %	20.0±2.0
pH (as is)	6.0±1.0
Density@25°C, g/ml	1.05±0.05
Boiling Point	100°C
Flash point	None (aqueous)
Storage	Store at 5-25°C, protect from heat*
Shelf life	12 months

Packaging and Handling

Flexipol DMP-20 is available in:
275 gallon totes (Net Wt. 2205 lbs)
55 gallon plastic drums (Net Wt. 441 lbs)

*This product is sensitive to heat. Storage at higher than recommended temperature will result in increase of color and viscosity. Prolonged or high heat exposure may cause product degradation and off-gassing that could lead to container rupture. Refer to Material Safety Data Sheet (MSDS) for additional information on the safe use, handling, and disposal of this product.

Whether you're looking for a replacement product or an ingredient for a specific attribute, give us a call. We can provide assistance based upon your particular formulation requirements and composition; please feel free to contact us.

Please refer to back page for important information

Flexipol DMP-20

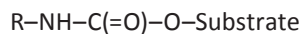
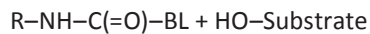
Blocked Isocyanate (BI) cross-linking agent

Blocked isocyanate (BI) products have been used in the coating industry as cross-linking agents and adhesion promoters for decades, known for their high reactivity and selectivity towards various functional polymers, and substrates.

Functionality

Blocked isocyanate (BI) compounds are inert and nonhazardous materials that can be compounded into stable products, stored, transported, and applied to a substrate, or added to a pad application bath mix containing a soil release or DWR finishing agent.

When the coating or finish containing the BI is dried, then cured at unblocking temperatures/times sufficient to liberate free isocyanate groups, the transient free isocyanate groups react with hydroxyl or other functional groups on the co-binder polymer and/or substrate, leading to rapid cross-linking of the coating with increased covalent bonding with the substrate.



The freed blocking agent is either liberated as VOC, or remains mainly trapped in the coating.

This information relates only to the specific material referred to herein and not to its use in combination with any other material or in any process, unless explicitly stated herein. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled; however, no warranty, guarantee or other representation is made as to its accuracy, reliability, or completeness, or regarding any liabilities arising from others' intellectual property rights. ID# 20140421