

Water-Based High-Temperature PU Foam Mold Release Agent for Automotive Steering Wheel Polyurethane Foaming

Our Product Introduction

Basic Information

- Place of Origin: Shanghai, China
- Brand Name: Lubekote
- Certification: ISO 9001:2015
- Model Number: PU-SW-01
- Minimum Order Quantity: 20 kg
- Price: USD 8-18 / kg
- Packaging Details: 25L/barrel, 200L/drum, or customized packaging available
- Delivery Time: 7-15 working days
- Payment Terms: T/T
- Supply Ability: 5000 kg per month



Product Specification

- Application: Automotive Steering Wheel PU Foam Molding, Polyurethane Integral Skin Parts
- Dispersing Medium: Water-based
- Coating Type: Semi-permanent
- Appearance: White To Off-white Emulsion
- Odor: Slight, Non-irritating
- Temperature Resistance: Up To 200°C Mold Surface
- Surface Finish: Perfect Smooth Finish
- Dilution Ratio: Ready To Use Or Dilute With Deionized Water
- Transfer Resistance: Non-transferring To Finished Products
- Shelf Life: 12 Months In Sealed Container At 5-35°C
- Highlight: **PU foam mold release agent, steering wheel release coating, water-based polyurethane demolding**

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Product Description

Water-Based High-Temperature PU Foam Mold Release Agent for Automotive Steering Wheel Polyurethane Foaming

Lubekote PU-SW series is a premium water-based semi-permanent mold release agent specifically engineered for automotive steering wheel polyurethane foam molding applications. This advanced release technology addresses the unique challenges of high-temperature PU foaming processes where mold surface temperatures can exceed 180°C. The formulation creates a durable, chemically bonded release film that delivers consistent, flawless demolding performance while imparting a perfect surface finish to the molded steering wheel components. Unlike conventional wax or silicone-based release agents that can leave residues and compromise subsequent bonding or coating operations, this water-based solution provides a clean, non-transferring release that preserves the dimensional accuracy and aesthetic quality demanded by automotive OEM specifications.

Developed through extensive collaboration with leading automotive parts manufacturers, Lubekote PU-SW release agent has been optimized for both open-pour and closed-mold PU foaming systems commonly used in steering wheel production. The environmentally friendly water-based formulation eliminates hazardous solvent emissions, aligning with the automotive industry's increasing focus on sustainable manufacturing practices. Its semi-permanent coating characteristic significantly reduces the frequency of mold preparation interventions, enabling manufacturers to achieve higher production throughput while maintaining consistent part quality across extended production runs. The product is fully compatible with both MDI and TDI based polyurethane foam systems used in steering wheel manufacturing.

Key Features

- **Water-Based Eco-Friendly Formula:** Solvent-free composition eliminates VOC emissions from the molding environment, ensuring compliance with stringent automotive industry environmental standards and improving workplace safety for mold operators.
- **High-Temperature Performance:** Engineered to maintain release integrity at mold surface temperatures up to 200°C, providing reliable demolding performance in the demanding thermal conditions characteristic of PU foam steering wheel production.
- **Perfect Surface Finish:** Delivers an exceptionally smooth, defect-free surface on molded steering wheel components that meets the exacting aesthetic and tactile quality standards of automotive interior parts.
- **Non-Transferring Clean Release:** Does not migrate to the molded PU foam surface, ensuring full compatibility with subsequent leather wrapping, painting, coating, and adhesive bonding processes without additional cleaning steps.
- **Minimal Mold Build-Up:** The advanced polymer formulation resists accumulation on mold surfaces over repeated cycles, significantly extending the intervals between mandatory mold cleaning and maintenance operations.
- **Semi-Permanent Multi-Cycle Durability:** A single application provides reliable release across multiple molding cycles, dramatically reducing mold preparation time and per-unit release agent consumption costs.
- **Easy Application Process:** Simple spray application with rapid water evaporation and film formation, requiring no specialized equipment or curing procedures that would slow down production cycle times.

Technical Specifications

Parameter	Specification
Product Series	Lubekote PU-SW Series
Classification	Chemical mold release agent
Dispersing Medium	Deionized water
Appearance	White to off-white emulsion
Odor	Slight, non-irritating
pH Value	6.5 - 7.5
Specific Gravity	0.98 - 1.02 g/cm ³
Maximum Mold Temperature	200°C
PU System Compatibility	MDI and TDI based polyurethane foam systems
Shelf Life	12 months in original sealed container at 5-35°C

Applications

Lubekote PU-SW release agent is purpose-designed for automotive steering wheel manufacturing where high-quality PU foam molding is critical to product performance and appearance. Primary application areas include steering wheel rim PU foam over-molding, steering wheel integral skin PU foam production, automotive interior trim PU foam components, gear shift knob PU foam molding, and other automotive interior polyurethane parts requiring premium surface finish and reliable demolding. The product performs excellently on both aluminum and steel mold tooling commonly used in steering wheel production lines. It is fully compatible with automated spray application systems and robotic mold coating equipment used in high-volume automotive parts manufacturing facilities.

Packaging & Quality Assurance

Lubekote PU-SW release agent is supplied in standard 25L/barrel and 200L/drum packaging configurations, with customized packaging solutions available to accommodate specific production line dispensing requirements. Comprehensive quality control testing is performed on every production batch including multi-cycle release performance evaluation on production-representative PU foam systems, thermal stability verification at elevated mold temperatures, surface finish assessment using calibrated profilometry equipment, and coating durability testing under simulated production conditions. Manufactured in an ISO 9001:2015 certified facility, each batch delivers consistent performance and reliability. Shanghai LoreChem Co., Ltd. provides dedicated technical support services including on-site application optimization, mold preparation consultation, and compatibility testing with customer-specific PU foam formulations to ensure maximum productivity and quality outcomes.



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