Technical Data Sheet

LENIUM™ RZ2
Rinse Agent

Product Description

LENIUM® RZ2 is a proprietary hydrofluoroolefin (HFO) fluid specifically engineered for use as a high-performance rinsing agent in co-solvent and bi-solvent vapor degreasing processes. It also functions as a flush solvent for precision cleanliness testing and particle counting, as well as a carrier fluid for the deposition of fluoro-lubricants. Designed to address evolving regulatory and environmental standards, LENIUM RZ2 offers a viable replacement for hydrofluorocarbons (HFCs), hydrofluoroethers (HFEs), n-propyl bromide (nPB), trichloroethylene (TCE), perchloroethylene (PERC), and trans-1,2-dichloroethylene (TRANS).

LENIUM RZ2's distinctive physical properties—high density, low viscosity, and low surface tension—enable superior wetting and cleaning performance. Its nonflammability, chemical and thermal stability, low toxicity, and efficient recovery through distillation further enhance its versatility across diverse applications. Although its solvency is selective, this can be optimized through tailored blends with alcohols, hydrocarbons, esters, and other compatible solvents, broadening its applicability.

This combination of advanced characteristics positions LENIUM RZ2 as an ideal solution for industries seeking sustainable, high-performance alternatives for critical cleaning and lubrication processes. Comprehensive technical and safety details can be found in the product's Technical Data Sheet (TDS) and Safety Data Sheet (SDS).

Properties

Appearance	Clear Liquid
Viscosity (cST, 25 °C)	0.57
Density (g/cm^3, 25 °C)	1.39
Flash Point	None
Boiling Point	129.2 °F (54 °C)
Specific Heat (kJ/kg C)	1.34
Heat of Vaporization (KJ/kg@ boiling point)	213
Kauri-Butanol (KB) Value	44

Benefits

- Non-flammable, reducing fire hazards.
- Not classified as a Hazardous Air Pollutant (HAP).
- High solvency power for effective cleaning (Kb value of 44).
- Optimal boiling point (54°C) for efficient cleaning and drying.
- Chemically and thermally stable under various conditions.
- Easily recoverable through distillation for reuse.
- High Acceptable Exposure Limit (AEL) of 250 ppm for worker safety.

Vantage Specialties, Inc.
3938 Porett Drive • Gurnee, Illinois 60031 USA • P +1 847 244 3410 • F +1 847 249 6346 • www.vantagegrp.com

Technical Data Sheet

LENIUM™ RZ2 Rinse Agent

- Compatible with ultrasonic cleaning for complex and delicate components.
- Selective solvency for customized cleaning with blends.
- Effective replacement for traditional solvents (e.g., nPB, TCE, PERC) with lower environmental and health risks.

Applications

Co-solvent Vapor Degreasing

Co-solvent cleaning is a vapor degreasing technique in which two solvents of different compositions are combined to meet regulatory, performance and compatibility requirements. This method is suitable for use in dual-sump vapor degreasers.

1) **Cleaning:** LENIUM RZ2 Rinsing Agent and a selected SOLVAG-branded Solvating Agent are blended in the boil sump of the vapor degreaser. Parts are immersed in this mixture, where the Solvating Agent effectively dissolves and removes oils, greases, and other contaminants effectively.
2) **Rinsing:** Cleaned parts are exposed to the pure Rinsing Agent, either by immersion in the rinse sump or through direct vapor contact. This step removes residues of the Solvating Agent and contaminants, providing a thorough rinse for a residue-free finish.
3) **Drying:** The parts are dried in the vapor zone, where the Rinsing Agent evaporates completely, leaving the surfaces clean, dry, and free from residues. The condensed solvent is returned to the system for reuse, making the process efficient and environmentally friendly.

Bi-solvent Vapor Degreasing

Bi-solvent cleaning is a vapor degreasing technique in which two solvents of different compositions are used sequentially to meet regulatory, performance and compatibility requirements.

1) **Cleaning**: Parts are immersed in a tank containing a SOLVAG-branded Solvating Agent. This step ensures thorough initial cleaning by breaking down soils effectively. Heat and agitation may be incorporated to improve cleaning ability.
2) **Rinsing**: The parts are transferred to a vapor degreasing system, where are rinsed using a LENIUM RZ2 Rinsing Agent, either by immersion or through direct vapor contact. This step prevents soil redeposition and removes any residues of the Solvating Agent or contaminants, ensuring a spotless finish.
3) **Drying:** The parts are dried in the vapor zone, where the Rinsing Agent evaporates completely, leaving the surfaces clean, dry, and free from residues. The condensed solvent is returned to the system for reuse, making the process efficient and environmentally friendly.

Technical Data Sheet

LENIUM™ RZ2
Rinse Agent

Environmental/Regulatory

Ozone Depletion Potential (ODP)	0.00002
Global Warming Potential (GWP)	Low
Acceptable Exposure Limit (AEL)	250 ppm
National Emission Standards for Hazardous Air Pollutants (NESHAPs)	Not regulated
Superfund Amendments and Reauthorization Act (SARA)	Not regulated
Resource Conservation and Recovery Act (RCRA)	Not regulated
Permissible Exposure Limit (PEL, ACGIH)	0.1 ppm

Disposal/Safety

Disposal

Vantage recommends contacting your current or local environmental service company for proper disposal.

Safety

Please see Safety Data Sheet for further information.

Packaging

Available in 55 lb (25 kg) pails and 600 lb (272 kg) drums.

Shelf Life

36 months when stored in original, sealed container above 50 °F (10 °C).

ISO 9001:2008

RoHS Compliant

LEAD FREE

Vantage Specialties, Inc.
3938 Porett Drive • Gurnee, Illinois 60031 USA • P +1 847 244 3410 • F +1 847 249 6346 • www.vantagegrp.com