



LENIUM[®] ES

Technical Data Sheet

LENIUM ES is a high performance solvent cleaner designed to operate in open-top and vacuum vapor degreasers. This proprietary cleaner is a mixture based on n-propyl bromide (*n*PB), isopropyl alcohol (IPA) and stabilizers.

LENIUM ES is effective in electronics defluxing applications, removing solder fluxes, pastes and ionic residues from circuit assemblies. It also effectively removes adhesives, buffing compounds, drawing oils, greases, hydraulic oils, lapping compounds, resins, inks, silicone oils and high melting waxes.

LENIUM ES is a drop-in replacement for trichloroethylene (TCE), HCFC-141b, HCFC-225, hydrofluorocarbons (HFCs), hydrofluoroethers (HFEs), perchloroethylene (PCE) and methylene Chloride (MeCl).

LENIUM ES is a non-flammable solvent, approved by the EPA's Significant New Alternatives Policy (SNAP) as an alternative to ozone depleting substances.

LENIUM ES leaves low surface residue and is safe for use with ferrous and non-ferrous alloys such as aluminum, copper and copper alloys, magnesium, nickel, steel, stainless steel, titanium and zinc. It is also compatible with many polymeric substrates and elastomers.

LENIUM ES is supported by a global network of technical representatives, capable of solving the industries most difficult cleaning applications.



LENIUM is a registered trademark of Petroferm Inc

FEATURES & BENEFITS

- Electronics Cleaner
- Removes Ionics, Flux, Paste
- Drop-In Replacement
- Very High Solvency
- SNAP Approved
- Replaces TCE, PCE, etc
- Fast Dry Time
- Non-Flammable
- Good Material Compatibility
- Low Surface Residue/NVR

PROPERTIES

| | |
|----------------------------------|--------------|
| Appearance..... | Clear liquid |
| Flash Point..... | None |
| Boiling Point..... | 154°F (68°C) |
| Specific Gravity (25°C)..... | 1.25 |
| Viscosity (25°C)..... | 0.49 cps |
| Vapor Pressure (20°C)..... | 110.8 mm Hg |
| Evaporation Rate (TCA = 1)..... | 0.96 |
| Specific Heat (25°C)..... | 0.27 |
| Heat of Vaporization..... | 58.8 cal/g |
| Kauri-Butanol (KB) Value..... | 125 |
| Flammability Limits (vol %)..... | 4-7.8 |
| Solubility in Water..... | <100 ppm |
| Solubility of Water..... | 2,500 ppm |

PROCESS

Add LENIUM ES at full concentration to the tank reservoir(s). See Vapor Degreasing Operating Manual for more information.

Controller Settings

| | |
|---|-----------------|
| Liquid Temperature Controller/Sensor (LTC)..... | 164°F (73°C) |
| High Temperature Controller (HTC)..... | 169°F (76°C) |
| Safety Vapor Controller (SVC)..... | 144°F (62°C) |
| Vapor Up Temperature (VU)..... | 144°F (62°C) |
| Primary Refrigeration Temperature..... | 35-40°F (2-5°C) |

SOILS REMOVED

- Adhesives
- Buffing Compounds
- Drawing Oils
- Fluxes & Pastes
- Greases
- Hydraulic Oils
- Ionic Contamination
- Lapping Compounds
- Silicone Oils
- Waxes

LENIUM ES

EQUIPMENT

- LENIUM ES is suitable for use in a variety of commercially available cleaning equipment including open-top and vacuum vapor degreasers.
- Companies requiring new equipment may contact Petroferm for supplier recommendations.
- Companies requiring acid acceptance kits, vapor monitoring badges and nPB Super Booster may contact Petroferm for availability.

APPROVALS & TESTING

Approvals

Goodrich Landing LGPS 1400 Solvent Cleaning/Degreasing
Lockheed Martin EMAP G41.149

SHELF LIFE

The shelf life for this product is thirty-six (36) months when it is stored in its original, sealed container at room temperature.

However, the product should be inspected after thirty-six (36) months from the date of manufacture prior to customer use.

Typical property data is not intended for specification purposes. Petroferm, its sales agents and distributors make no warranty of merchantability of the product or of product fitness for any particular purpose. This product and all information supplied are used at the purchaser's own risk. The purchaser assumes all risk of use or handling of the product, whether in accordance with directions or not.

ENVIRONMENTAL/REGULATORY

| | |
|--|---------------|
| Ozone Depletion Potential (ODP)..... | 0.013-0.018 |
| Global Warming Potential (GWP):..... | Low |
| Significant New Alternatives Program (SNAP)..... | Approved |
| 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 |
| Acceptable Exposure Limit (AEL)..... | 25 ppm |

DISPOSAL/SAFETY

Disposal: Petroferm recommends contacting your current or local environmental service company for disposal of this product.

Safety: Please see Material Safety Data Sheet for further information.

Storage: LENIUM ES should be stored in the original container, preferably above 50°F (10°C), in a ventilated, fire-resistant building.

Packaging: LENIUM ES is available in 50 lb (23 kg) pails and 550 lb (249 kg) drums.



Petroferm

Advanced Products for Advanced Cleaning

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