ESD-SAFE FLUX DISPENSER · NEEDLE & CHISEL PEN TIPS

# I.C.® ESD FLUX DISPENSERS

**Static dissipative blue 2 oz bottle** · Stainless needle tips (16, 20, 26 ga) or chisel pen tip · Luer-lock hub

## PRODUCT DESCRIPTION

I.C. ESD Safe Flux Dispensers are designed to dispense flux safely and cleanly in any cleanroom environment. Surface resistivity of $10^9$ to $10^{10}$ Ω/sq and an average static decay rate of 0.5 seconds at 40% RH allow ease of access into static-sensitive environments. A stainless-steel needle-tip spout dispenses a precise and consistent supply of flux with no unnecessary resistance to the operator. The **pen-tip** version uses a chiseled pen tip for a precise and consistent spread of flux.

## DIRECTIONS FOR USE

Unfasten the nozzle from the base to fill the ESD bottle with flux. Tightly refasten the plug and draw the needle (or chiseled tip) through the nozzle. Fasten the nozzle and squeeze to dispense flux.

## USES

- For use in a cleanroom or sterile environment
- For use in dispensing flux onto circuit boards
- For use in storing flux or solvents

## APPLICATIONS

Electronics Manufacturing, Cleanrooms, Static-Sensitive Environments.

## FEATURES & BENEFITS

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|---|---|
| DEPENDABLE DISPENSING | Luer lock hub seals tightly onto a UV-bonded 304 stainless steel needle; the chiseled pen tip grips tightly onto the Luer lock hub and seals for dispensing |
| CORROSION SAFE | Compatible with flux, no-clean, water soluble, rosin, and acid solutions |
| APPLICATION CONTROL | Premium pen tip provides a clean and controlled spread of flux |
| INDUSTRY STANDARD | 3 sizes and colors: 16 gauge in black, 20 gauge in pink, 26 gauge in red |
| LIMITLESS ACCESSIBILITY | Eliminate lab restrictions by placing unsafe materials in ESD-safe containers |
| HIGH DURABILITY | MDPE is highly durable and chemical resistant |
| GRIP RIGHT MATERIAL | Flexible material allows for precise and appropriate resistance |
| LEAK-PROOF | Moldings are fitted to their matching tops and form a seal when enclosed |
| CLOSE QUARTERS | Material can be kept within reach inside of your workstation |
| ESD BLUE | Designed retaining the iconic "ESD-Safe" blue tint to be easily identifiable |
| EASY-SPOT MATERIAL | Translucent material allows for easily identifiable inner contents and levels |
| SAFER PLASTIC | Made with no PBDE, BPA, or other known plastic contaminants |
| CONTAMINANT-FREE | Free of amines, amides, and other known antistatic additive contaminants |
| STAINLESS MATERIAL | Non-stick plastic cleanses all contents and contaminants from its surface |
| ODOR RESISTANT | Free of trace odors or fragrances left by solvents and other chemicals |
| DISHWASHER SAFE | Can be washed on the top rack of a dishwasher for cleaning and reuse |
| ECO-FRIENDLY | Material is formulated to be recyclable and reusable |

## FREE OF

- BPA-FREE
- PHTHALATE-FREE
- PVC-FREE
- PBDE-FREE
- CONTAMINANT-FREE
- LEAK-FREE
- DISHWASHER-SAFE
- ECO-SAFE

## MATERIAL & ESD DATA

| | |
|---|---|
| MATERIAL | MDPE with antistatic additive |
| COLOR | ESD blue, translucent |
| SURFACE RESISTIVITY | $10^9$ to $10^{10}$ Ω/sq |
| STATIC DECAY | Average 0.5 s at 40% RH |
| ADDITIVES | Free of amines and amides |

## WORKPLACE SPECIFICATIONS

- Supports an ANSI/ESD S20.20 program
- Exceeds MIL-B-81705 & NFPA-56A: electrostatic decay in accordance with Federal Test Standard 101, Method 4046
- Tested to ESD ADV 11.21: surface resistance of electrostatically dissipative materials between $1\times10^4$ and $<1\times10^{11}$
- Meets EIA 625 triboelectric charge standards
- Helps meet ANSI/ESD S4.1
- DOD-HDBK-263 Military Spec Compliant

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## EFFICACY TESTING

**Static decay** (5 kV @ 40% humidity) — the ability of a grounded material to dissipate a known charge induced or applied onto its surface.

| CUTOFF | MIN | MAX | AVERAGE |
|---|---|---|---|
| 1% | 0.04 s | 0.07 s | 0.05 s |
| 10% | 0.02 s | 0.03 s | 0.03 s |

**Surface resistivity** (100 V @ 40% humidity), test method ASTM D257, Ω/sq.

| SUBJECT | MIN | MAX | AVERAGE |
|---|---|---|---|
| 1% | $1.86\times10^{10}$ | $2.18\times10^{10}$ | $1.97\times10^{10}$ |
| 10% | $4.08\times10^{10}$ | $5.03\times10^{10}$ | $4.48\times10^{10}$ |

**Surface resistance** (100 V @ 40% humidity).

| CUTOFF | MIN | MAX | AVERAGE |
|---|---|---|---|
| 1% | $4.22\times10^{8}$ | $7.00\times10^{8}$ | $5.51\times10^{8}$ |
| 10% | $4.50\times10^{7}$ | $1.18\times10^{8}$ | $7.02\times10^{7}$ |

**Static decay, packaging material** (decay time in seconds, 5 kV @ 15% RH).

| MATERIAL | PVC SLEEVE | PE FOAM | PS FOAM |
|---|---|---|---|
| Result | 0.35 | 0.17 | 0.17 |

**I.C. ESD bottles solvent residue testing** (seven-day exposure). The pH of the water solutions was the same (ca. 5.9) before and after; no color change or other physical change was noted for any of the solvents.

| SOLVENT | WT. RESIDUE (G) | CONC. (MG/ML) | CONC. (PPM) |
|---|---|---|---|
| L-TCE | 0.0256 | 0.13 | 97 |
| L-MEK | 0.0191 | 0.096 | 120 |
| L-IPA | 0.0082 | 0.041 | 52 |
| L-$H_2O$ | <0.001 | <0.01 | <5 |

## CHEMICAL PROPERTIES

I.C. ESD Safe Bottles use MDPE and an antistatic additive which is compliant with FDA regulation for use in food contact: 21 CFR 177.1520 · 21 CFR 178.2010 · 21 CFR 178.3297 · 21 CFR 178.3120. Does not contain BPA, phthalates, or heavy metals.

## QUICK CHEMICAL REGULATORY REFERENCES

| | |
|---|---|
| PROP 65 | No known substances |
| TSCA | No known substances |
| SARA | No known substances |
| REACH | No known substances |
| ROHS | No known substances |

## SIZES & PART NUMBERS

| PART NO. | SIZE | CASE | UPC |
|---|---|---|---|
| FD-1-ESD | 26 ga needle, 0.009″ ID, red | 50 | 666080848118 |
| FD-2-ESD | 20 ga needle, 0.023″ ID, pink | 50 | 666080848125 |
| FD-3-ESD | 16 ga needle, 0.047″ ID, black | 50 | 666080848132 |
| FD-PEN-ESD | Chiseled pen tip | 50 | 666080848149 |
| FD-PEN-TIP | Pen tips, 5-pack (no bottle) | 1 | 666080848347 |

## CHEMICAL COMPATIBILITY & CLEANING

For chemical compatibility or resistance information, refer to the ESD Bottle Chemical Resistance Chart at **rrlotion.com/esd-bottle-chemical-resistance-chart/**. Bottles can be washed on the top rack of a dishwasher for cleaning and reuse.

## STORAGE & SHELF LIFE

This product has a shelf life of at least 24 months from the date of manufacture. Some ESD bottles will degrade over time depending on the solvents used and frequency of use.

## REGULATORY

This product is an ESD product, manufactured and labeled in compliance with Federal Regulation and current Good Manufacturing Practices (cGMP). R&R Lotion is an FDA and EPA registered and audited facility.

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|---|---|
| FDA EST. ID | 3004167955 |
| EPA FACILITY | 91651-AZ-001 |
| FDA DRUG CODE PREFIX | 59555 |

## SAFETY DATA SHEETS

For safety, environmental, handling, first aid and disposal information, refer to the Safety Data Sheet (ESD Bottles) in the SDS library at **rrlotion.com/msds/**

## QUALITY ASSURANCE

**Facility standards.** R&R Lotion products are manufactured in facilities which follow Current Good Manufacturing Practice (cGMP) and/or Cosmetic GMP requirements.

**Material standards.** All raw material used for production undergoes a thorough quality control process before being used for manufacturing.

**Equipment standards.** All equipment used in manufacturing and production areas is regularly inspected and maintained to ensure consistent and controlled results.

**Finished product testing.** Each batch produced by R&R Lotion goes through physical and chemical testing before being released for distribution. This involves testing of appearance, color, electrostatic discharge, and density.

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