

# Pouch cell conveying trays



## Key requirements

- Controlled electrostatic dissipation (ESd) by tight range of surface resistivity, also after machining
- Maintain surface resistance after being exposed to high voltage
- Wide range of products (wide portfolio) available for use, in consideration of operating temperature, chemical resistance, and mechanical properties
- Maintain semi-permanent ESd function unlike conventional coating methods

## Customer benefits

- Damage prevention from uncontrolled discharges
- Increased employee safety during production

## Our recommendation:

- Semitron® ESd 520HR PAI (A)
- Semitron® ESd 500HR PTFE (A)
- Semitron® ESd 490HR PEEK (A)
- Semitron® ESd 480 PEEK (D)
- Semitron® ESd 420V PEI (D)
- Semitron® ESd 420 PEI (D)
- Semitron® ESd 410C PEI (C)
- Semitron® ESd 300 PET (D)
- Semitron® ESd 225 POM (D)

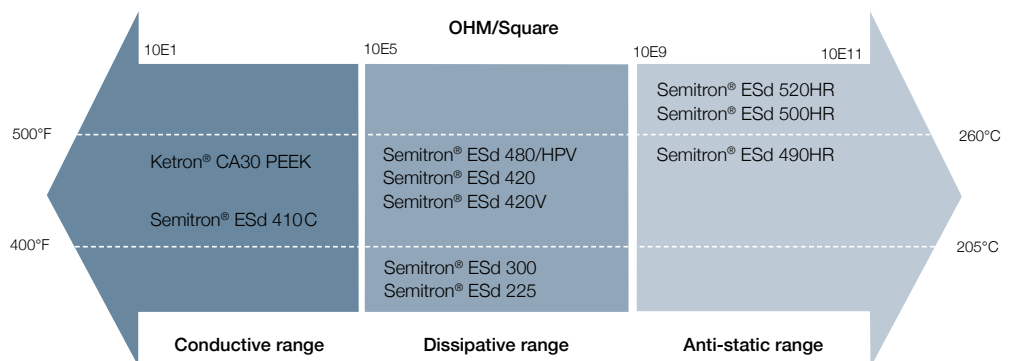
A = Anti-Static  
D = Static Dissipative  
C = Conductive

## Consistent ESd performance at high voltage exposure

**Prevent static electricity build-up in battery production systems by providing conductive, dissipative, and antistatic properties over a long lifetime.**

During assembly and conveyance of the battery, static electricity can build up when separate parts rub against each other or when dry air blows over the parts. In order to prevent damage to the batteries, the static charge must be dissipated in a controlled way.

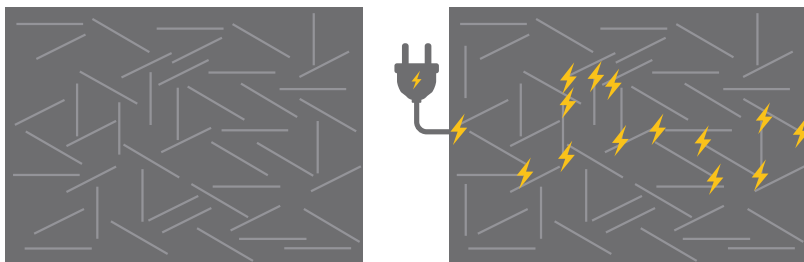
## ESd performance vs. temperature



## BATTERY PRODUCTION

### Effects of high voltage on carbon filled plastics

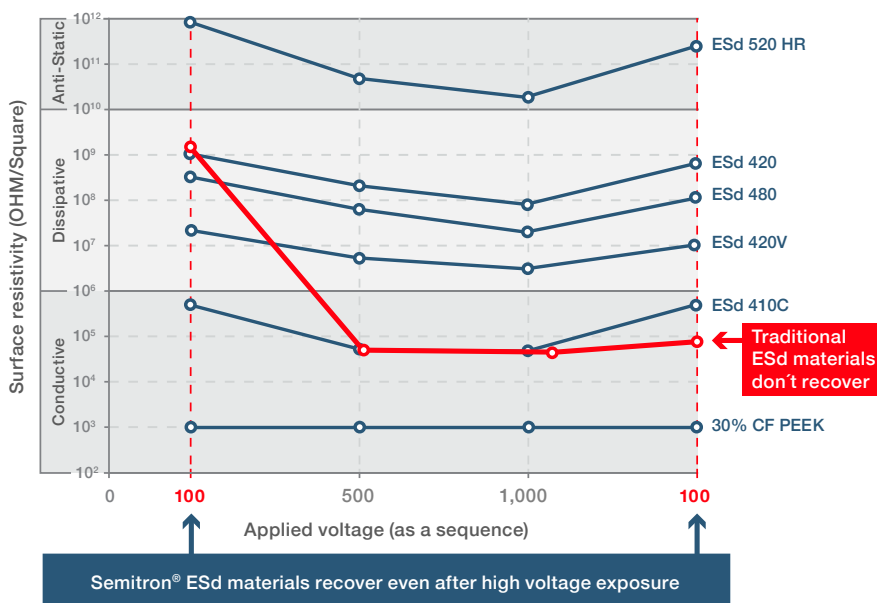
(Carbon-filled ESd plate)



When a threshold of electrical current is exceeded, the energy will arc across the plate essentially “frying” a path.

Latest technology of the Advanced Materials Division of Mitsubishi Chemical Group (MCG) actually allows for recovery of this path, maintaining properties after the applied voltage shock.

### High voltage exposure



### Why Semitron® ESd materials?

Semitron® ESd materials are designed for stable ESd properties. They will not change ESd properties after high voltage exposure.

Semitron® ESd materials are available as a comprehensive portfolio. This allows the designers to optimize the price/performance of their specific applications.

#### Europe

Mitsubishi Chemical  
Advanced Materials NV  
Galgenveldstraat 12  
8700 Tielt, Belgium  
T +32[0] 51 42 35 11  
F +32[0] 51 42 33 10  
contact@mcam.com

#### North America

Mitsubishi Chemical  
Advanced Materials Inc.  
2120 Fairmont Avenue  
PO Box 14235 - Reading, PA 19612-4235  
T 800 366 0300 | +1 610 320 6600  
F 800 366 0301 | +1 610 320 6638  
contact@mcam.com

#### Asia-Pacific

Mitsubishi Chemical  
Advanced Materials Asia Pacific Ltd.  
Unit 7B, 35/F, Cable TV Tower,  
9 Hoi Shing Road, Tsuen Wan, Hong Kong  
T +852 2470 26 83  
F +852 2478 99 66  
contact@mcam.com

mcam.com

All statements, technical information, recommendations, and advice are for informational purposes only and are not intended and should not be construed as a warranty of any type or term of sale. The reader, however, is cautioned that Mitsubishi Chemical Advanced Materials does not guarantee the accuracy or completeness of this information and it is the customer's responsibility to test and assess the suitability of the products of Mitsubishi Chemical Advanced Materials in any given application or for use in a finished device. Semitron® is a registered trademark of Mitsubishi Chemical Advanced Materials.

Design and content created by Mitsubishi Chemical Advanced Materials and protected by copyright law.  
Copyright © 2022 Mitsubishi Chemical Advanced Materials. All rights reserved.

