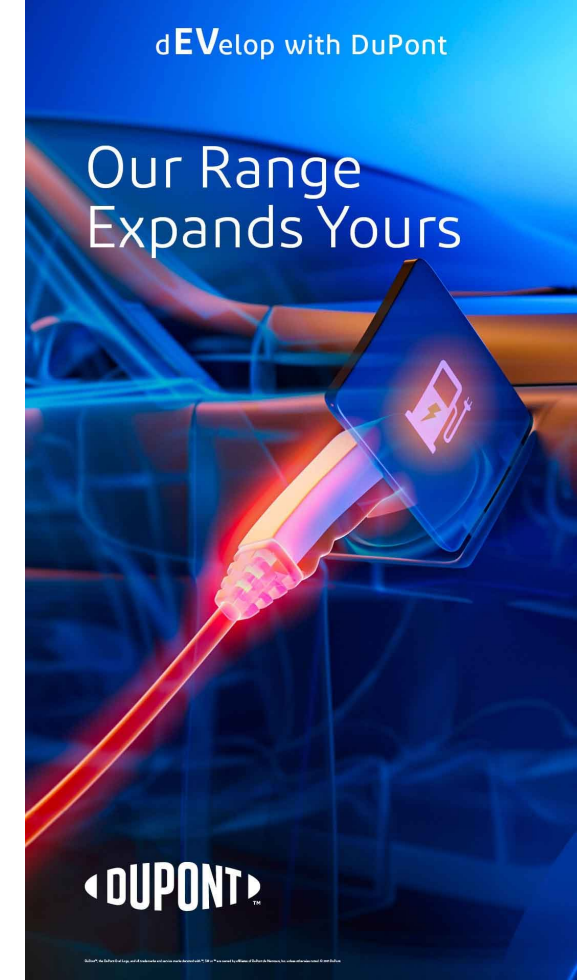
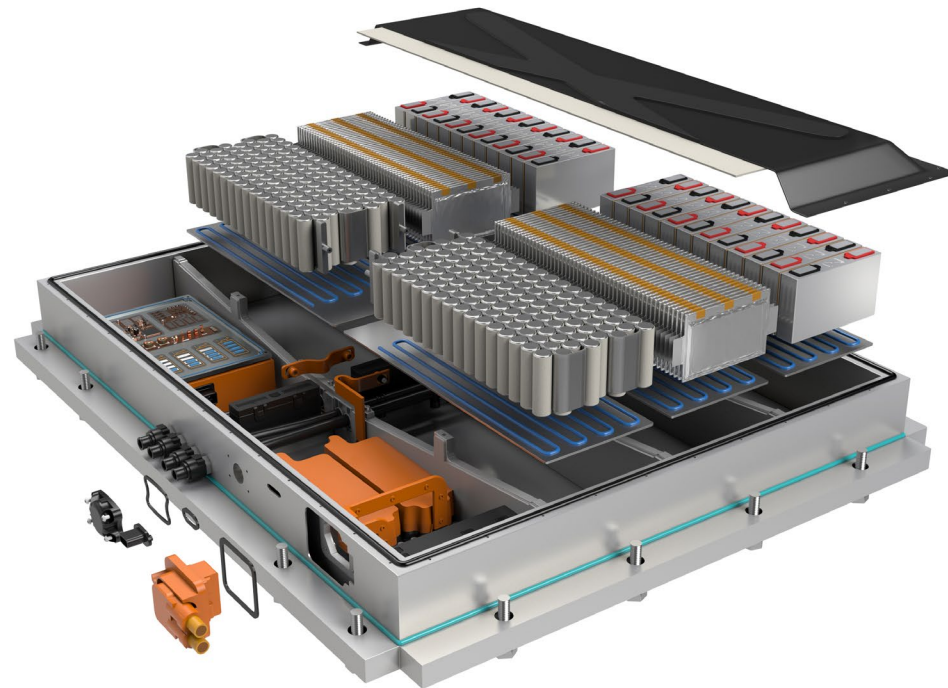


Cost-effective & Process-simplification Adhesives for Battery Pack Assembly and Thermal Management



DUPONT

NAATBATT 2025
EXTENDING RANGE

DuPont Adhesive Manufacturing



Midland, Michigan

- Production: Elastic Adhesives
- Glass Bonding and Mixed Material Bonding

BETASEAL™ BETAFORCE™ BETAPRIME™



Auburn Hills, Michigan

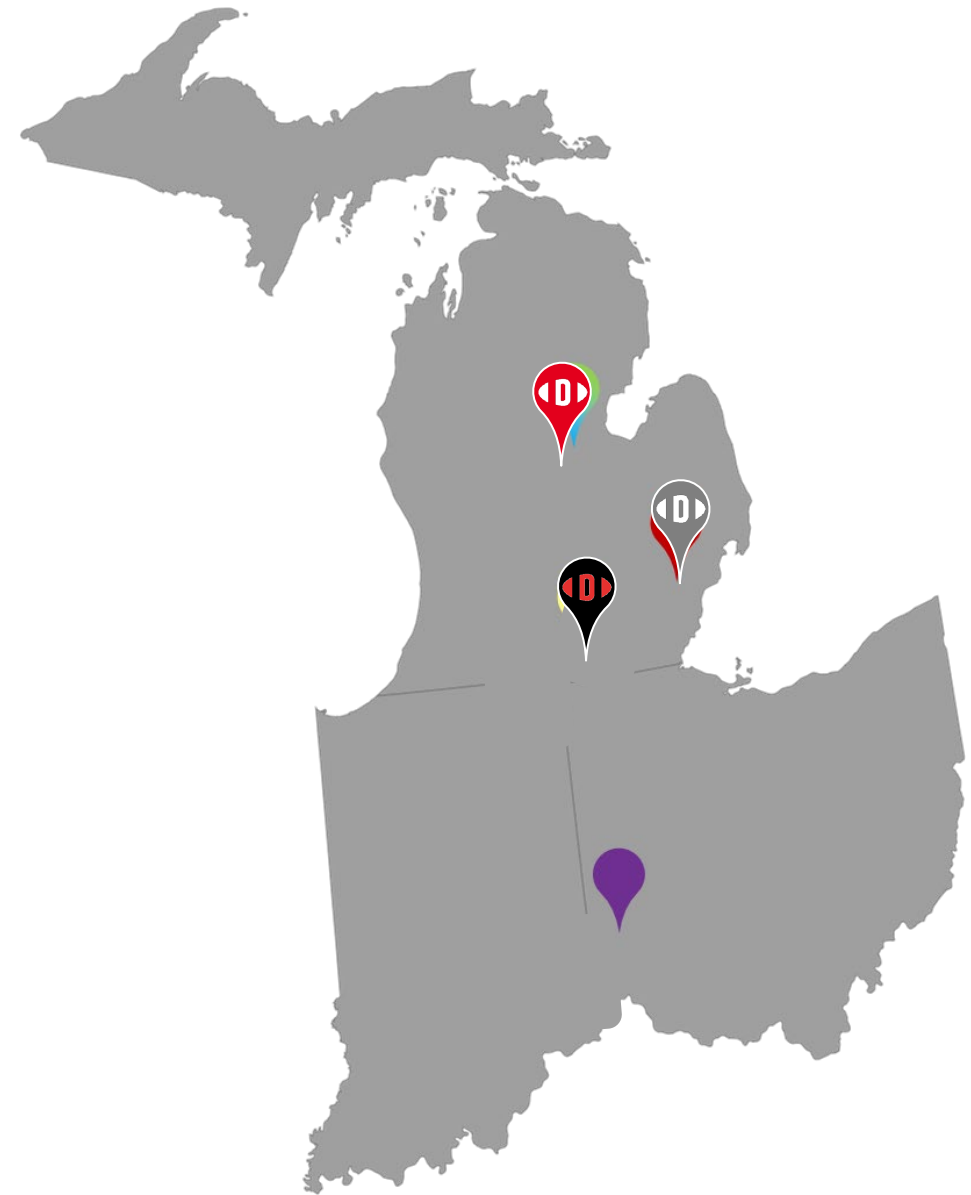
- Commercial Team
- Research and Development
- Customer Service



Hillsdale, Michigan


- Production: Epoxy Adhesives
- Structural and Closure Bonding


BETAMATE™ BETASEAL™ BETATECH™





DuPont Battery Technologies & Applications




- 
In Development

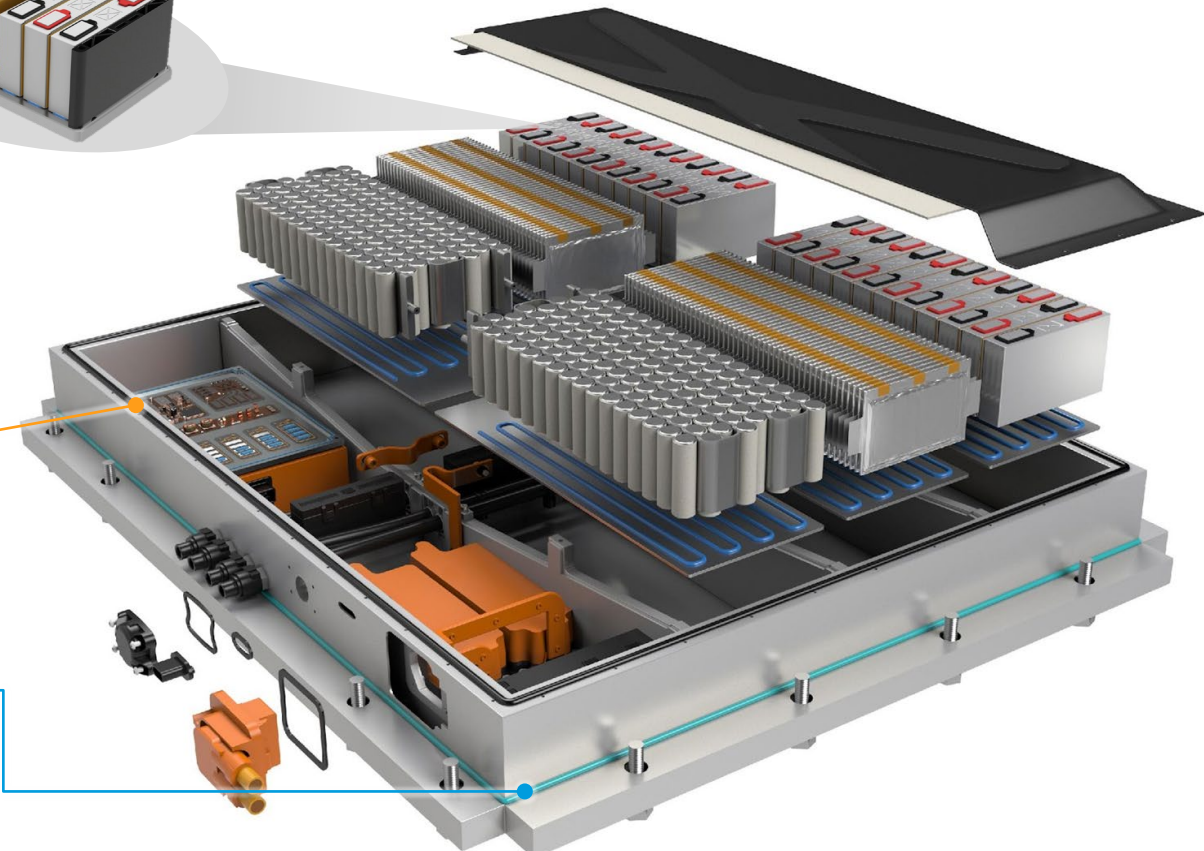
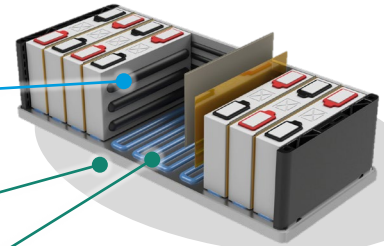
Semi- & Structural Adhesive
BETAFORCE™ Cell Bonding (PU)
- 
Commercial

Dispensable Thermal Interface Material
BETATECH™ (PU)
- 
Commercial

Thermal Conductive Adhesive
BETAFORCE™ TC (PU) / BETAMATE™ TC (EP)
- 
Commercial

Sealant
BETASEAL™ (PU) coextruded elastomer
- 
Commercial

Crash Durable Structural Adhesive
BETAFORCE™ (PU) / BETAMATE™ (EP)



- Anti vibration and NVH
- Lightweight
- Structural integrity
- Environment & corrosion protection
- Repair, Repurpose & Recycle ability
- Electrical insulation
- Thermal Conductivity
- Fire mitigation



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Thermal Materials for Pack Assembly

BETATECH™ Gap Filler

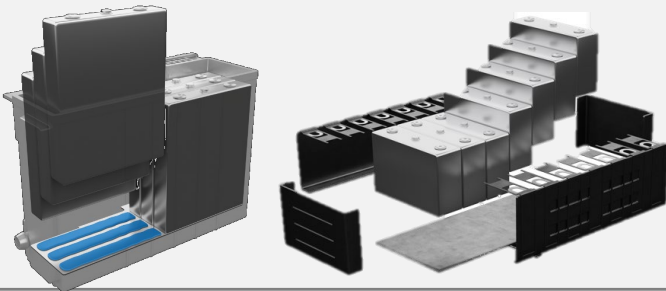
Thermal W/m·K
Conductivity

2.0-3.0

Shear
Strength MPa

0-1

- Ideal for *module-in-pack* designs
- Suitable for **all cell formats**
- Requires mechanical fixation through bracketing and fastening



BETAFORCE™ TC Adhesive

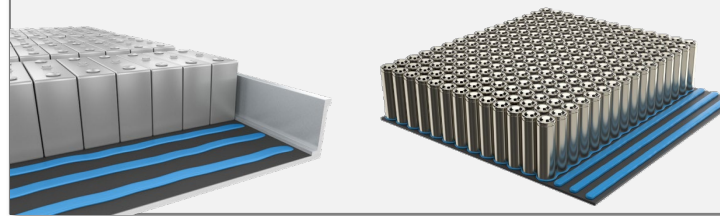
Thermal W/m·K
Conductivity

1.0-2.1

Shear
Strength MPa

3-9

- Ideal for *module-in-pack, cell-to-pack, or cell-to-vehicle designs*
- Suitable for **all cell formats**
- **Eliminates need for bracketing and fastening** through direct bonding



BETAMATE™ TC Adhesive

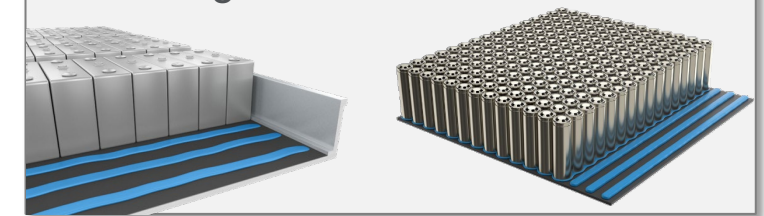
Thermal W/m·K
Conductivity

1.5-2.0

Shear
Strength MPa

9-15

- Ideal for *module-in-pack, cell-to-pack, cell-to-plate, or cell-to-vehicle designs*
- **Direct metal adhesion**
- Ideal for **cylindrical or prismatic cell** formats
- **Eliminates need for bracketing and fastening** through direct bonding

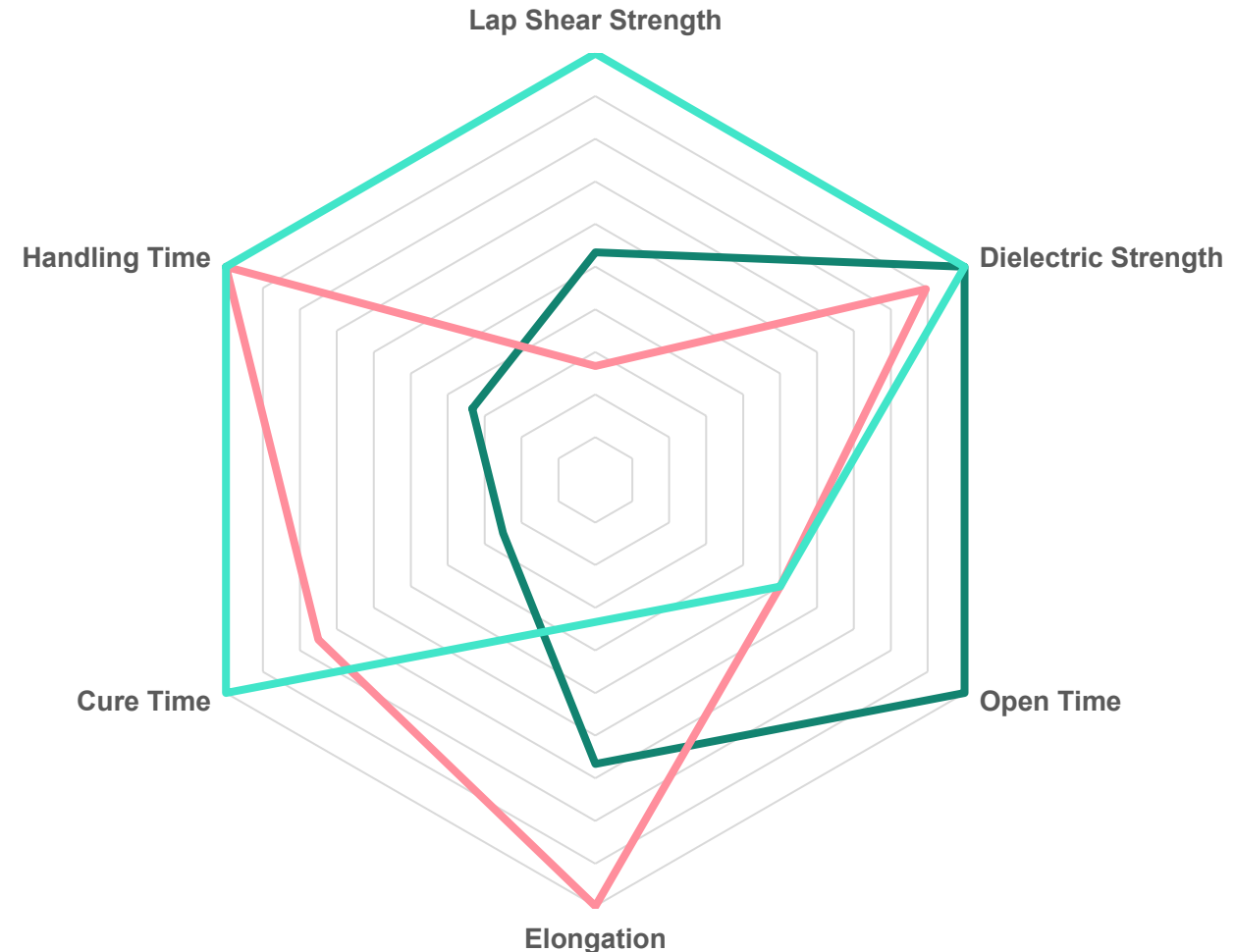


Comparison of Adhesive Chemistries

| BETAMATE™ TC | | 2K Epoxy |
|-------------------------------|-----------------|----------|
| Pro | Con | |
| Pretreatment-free BM adhesion | Slow Cure Speed | |
| Open time | | |

| BETAFORCE™ TC | | 2K Urethane |
|----------------------|-----------------------|-------------|
| Pro | Con | |
| Elongation | Plasma treat required | |
| Cure time | | |

| BETAMATE™ TC | | 2K Epoxy-Acrylic |
|-------------------------------|---------------------|------------------|
| Pro | Con | |
| Pretreatment-free BM adhesion | Elongation | |
| Cure time | Characteristic odor | |



Questions?



Frank Billotto

Business Development Leader - Americas

Frank.Billotto@dupont.com