



## CENTER FOR ADVANCED MATERIALS AND PACKAGING (CAMP)

### OVERVIEW:

This newly created facility at the Natick Soldier RD&E Center (NSRDEC) provides total life-cycle capability "from pellets to pallets" for advanced materials processing to innovative product development, testing and validation of new materials and designs. The Center provides the unique capability of developing new materials and rapidly scaling up optimized designs into finished packaged goods, giving NSRDEC full control over materials development and product design in one facility. New advanced testing equipment for flexible and rigid packaging is used to replicate the physical hazards a product endures during assembly, distribution, storage and end item use. The Center also has state of the art capabilities to allow for scale-up from laboratory to pilot scale extrusion. Processing capabilities include multilayer cast film co-extrusion, machine direction orientation (MDO), and twin screw compounding with an underwater pelletizer.

### Collin Multilayer Extruder with In-line Machine Direction Orientation

- 7-layer cast film line
- 7 single-screw extruders
- 30 mm screw diameter
- 14" slot die
- 6:1 machine direction orientation capability
- Calender type chill rolls

### Collin Twin Screw Compounder

- 35 mm counter rotating screws
- Melt pump, kneading blocks, mixing elements and shear edge elements
- Capable of feeding pellets and powders
- Underwater pelletizer

### Packaging Testing Equipment

- Compression tester 50"×60" for up to 20,000 lbf
- Computer aided manufacturing table with design software
- Drop tester with 168" drop height and 175 lbs capacity
- Mechanical vibration tables, 74"×101" and 42"×40"
- Environmental conditioning chambers

### POINT OF CONTACT:

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Twin Screw Compounder



Machine Direct Orientation (MDO) Equipment



(L) Compression Tester; (R) Drop Tester

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TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.