Polymer 101
Carpet America Recovery Effort

Ron Sherga

www.ronsherga.com
A rose by any other name

• Plastics
• Resins
• Poly
• Pellets
• Pleather
• Vinyl
• EPS
Main Polymer families

- Polypropylene (PP)
- Polyethylene (PE)
- Polystyrene (PS)
- Polyvinyl Chlorine (PVC)
- Engineering polymers- Polyamide (Nylon), Polycarbonate, Acrylic, value added polymers from compounders
Properties

- Melt flow, viscosity, melt Index
- Impact strength- Izod, gardner
- Stiffness- tensile, flex modulus
- Weight-specific gravity

Additives are made to alter these properties and are an industry unto themselves.
FR, Impact modifiers, fillers, colorants, UV
Processing Methods

• Injection molding - various parts
• Extrusion - pipe, fibers, sheet, compounders
• Blow mold - bottles
• Roto Mold – larger parts such as tanks
• Compression mold - pallets, RR Ties

Capital investment and commitment more serious - personnel, testing equipment, etc.
CHALLENGES

- Capital
- People
- Quality/Appearance
- Volume
- Consistency
- Logistics
- Conversion cost
- Global landscape
Resources

• Society of Plastics Engineers website
• American Chemistry Council- website
• Packaging Council- website
• Flexible packaging Association- website

To name a few……………….