



Contact: Susan Matson  
North Star Marketing  
Phone: 717-392-6982, ext. 114  
Email: smatson@northstar-m.com

For Immediate Release

### **Plastic and Metal Working Together**

*- McClarin Plastics' Material Systems provide lighter, more cost-effective and greener solutions to all metal components -*

Hanover, PA – There is an alternative to all metal machinery components. It's a Material System; a combination of materials where the values and properties of the individual materials combine to make what, in essence, is a new material. McClarin Plastics, Inc., a leader in thermoforming and vacuum infusion of fiber reinforced plastics, is developing systems which integrate plastic and metal or are all plastic composite systems. The benefits of these systems include: reduced weight, cost and in some cases less environmental impact.

“Material Systems can be used as a replacement for steel, aluminum or fiberglass. However, there are instances where these materials are the better choice, our engineers work with the designers to determine this,” said Roger Kipp, vice president of marketing and engineering for McClarin Plastics in Hanover, PA. “These Systems are especially important to OEM's who've had to deal with the tremendous surge in steel and oil prices.”

According to some estimates steel prices are up to 100 percent higher than a year ago and expected to continue to increase, Material Systems offer a solution to dramatically decrease the amount of metal used in a component. In the system, metal is used only as structural members with plastics comprising the remainder of the structure. By making the plastic substitution, a component's weight can be 1/6 to 1/8 of a solid metal component. For example, McClarin Plastics has been able to reduce the weight of a 400lb. all steel component to about 80lbs. using a material system.

“Not only does the Material System save in terms of metal costs, the lower weight can reduce transportation fuel costs and can make the part more user-friendly,” said Kipp.

Certain Material Systems can be developed that eliminate the need for any metal members. The System can involve a structural core sandwiched between a plastic outer skin. Not only can this system reduce weight and expense, it is non-conductive. The core material can provide insulation and sound reduction and can also be formed to accommodate other systems such as a power window motor and mechanism.

-more-

Generally, a component made of a Material System can withstand a greater impact if involved in an accident. Many times, the part can be reused where the repair of a metal component can be extensive and may require replacement because of bending. A fiberglass component, when impacted, more often than not has to be replaced.

When Material Systems are made of thermoplastics and metal, they are recyclable. When manufactured using lean principles, small run sizes and shorter run times can be accomplished saving energy, materials and manpower. Also, the systems can withstand the elements unlike metal which is susceptible to corrosion.

### **About McClarin Plastics, Inc.**

McClarin Plastics custom designs and manufactures Thermoformed and Fiberglass Reinforced Plastic products and components. For over 50 years, they have helped local, national and international companies find creative solutions using plastics applications. For more information, call 1-800-233-3189 or visit [www.mcclarinplastics.com](http://www.mcclarinplastics.com).

###



### **Integrated Material System**

The restroom compartment is manufactured using a Material System by McClarin Plastics. Fiberglass allows flexibility in design, intricate shapes and less weight. Metal components add rigidity and additional structural integrity where the design needs it.



### **Material System by McClarin Plastics**

The steel and fiberglass Material System used in a 34' windmill housing. The Material System removed approximately 80% of the weight of an all steel structure.