SUBJECT: **Poly-Flex** Flexible Polyester Glazing Putty

The following information is to provide further explanation on the use of Poly-Flex. There are numerous types of plastics. Though, most plastics can be grouped into two families: thermoplastics and thermoset plastics. It is necessary to identify the type of plastic being repaired so the proper repair can be performed.

Thermoplastics are formed with heat, and then cooled to shape. These plastics can be reshaped again by reheating and cooling. This can be done because there is no chemical reaction between the heating and cooling process. Thermoplastics can be cosmetically repaired with Poly-Flex using general repair procedures (i.e. sanding, cleaning and application of Poly-Flex). Within the thermoplastics there is a sub-group called olefin plastics. An example of olefin plastics are (TPO) Thermoplastic Olefin, (PE) Polyethylene and (PP) Polypropylene. Olefin plastics are the most difficult to adhere to. Therefore, it is recommended that an extra step is followed when repairing olefin plastics. The additional step of an adhesion promoter and/or a heat treatment is required. This additional step is required because olefin plastics contain a Mold Release Agent from the manufacturing process. It is recommended that a flame treatment be used to promote adhesion of Poly-Flex.

The second family of plastic is known as thermoset plastics. Thermoset plastics are manufactured with a chemical reaction, and therefore cannot be reformed or softened with heat.

Thermoset plastics fall into two categories: flexible or rigid. Examples of rigid thermoset plastics are (SMC) Sheet Molded Compounds and Fiberglass. Some examples of flexible thermoset plastics are urethanes such as (PUR) Polyurethane, (RIM) Reaction Injected Molded. These types of plastics may also require general preparation (i.e. cleaning, tapering, or sanding) prior to using Poly-Flex.

Conducting a ‘sanding test’ can identify Thermoset plastics and thermoplastics. Thermoplastics will smear or drag when power sanded. Thermoset plastics will sand to a fine powder and produce dust whether they are rigid or flexible.

FLAME TREATMENT

The process outlined below will oxidize the surface to enhance the adhesion of Poly-Flex on olefin plastics.

1. Clean and scuff the repair area and sand with 180 to 220 grit at a low RPM
2. Remove the sanding dust with an air blowgun
3. With a propane or butane torch sweep the area allowing the tip of the flame to lightly pass over the repair **NOTE: Do not let the flame heat the surface of the repair**; **heating the plastic can pull the mold release agents to the surface and cause poor adhesion for the repair material**
4. Apply Poly-Flex and continue with the repair.