



Hot Plastic

No matter how big or how small your company is, potential burns from contact with hot plastic are, unfortunately, a part of working in our industry. Severe burns can result from the improper handling of hot plastic. We all must take part in the shared responsibility of preventing these injuries. Many of these burns can be prevented. Equipment manufacturers have made great strides in manufacturing such items as purge guards and other engineering controls to protect workers from being struck by molten plastic. Other ways to prevent these burns include using personal protective equipment and educating and training employees on such topics as the hazards associated with hot plastic, when an injury is possible, and how to avoid injury.

Areas of concern, around a molding machine include:

Purge

Purge is the hot molten plastic that is extruded from Mold Press. This is the plastic that is taken out of the machine (at start up) that would not be used in the molded plastic part. Extruded purge will eventually take the shape of a solid piece. Consider all purges hot, especially if the purge has a gloss like appearance. Assume that each thick solid piece of purge has an inner core of liquid that has not yet cooled. Consider this scenario: An employee was removing purge from a molding machine. He picked up a large piece of purge and was struck in the face by molten plastic when he folded a piece to fit it into the purge bin. The hard outer shell broke open and sprayed out the still liquid inner core. His safety glasses protected his eyes, but he sustained a second-degree burn to the chin. The injury could have been much worse. This incident points out not only the need to wear a face shield and other personal protective equipment (such as heat resistant sleeves and gloves), but also the need for training all employees about the potential hazards involved.

Drool

Injection mold machines use plastic as a lubricant, and drool is the extruded name. You will find drool present in three locations: the nozzle area, under the plunger, and the rear. Drool should always be considered hot. The same concerns apply, especially if the drool is fresh. Employees should also be educated on the need to wear gloves and sleeves anytime they handle drool. Inexperienced employees may not realize that the plastic can still be hot, long after it solidifies.

Flash

Flash is the excess material at a parting line. It is the extra plastic that is attached to the rims of parts. Occasionally, these parts can have "globs" of hot molten plastic that should also always be considered hot. Flash can remain hot long after it appears cool. While the potential for hot plastic splash is generally not present with flash, occasionally employees get burns from handling parts with flash. Again, employees need to know that the flash can remain hot long after it appears cool; and that they should wear gloves to handle fresh parts with flash.

Here are some proven effective ways to prevent injury from exposure to the hot plastic:

- Train all employees in safe work practices and continue ongoing education with regard to injury prevention. This will raise awareness regarding what employees look for in assessing the plastic parts before handling. Give new employees examples of past injuries in the workplace.



- Posting warning signs around the equipment can be useful to both educate and warn employees of the dangers.
- Engineering Controls such as the addition of purge guards should be present to keep the hot purge away from employees. Whenever possible, all hazards should be engineered out.
- However, if the hazard cannot be engineered out, using personal protective equipment (PPE) is a must. Safety glasses and face shields should be used whenever there is a potential for splashing or spraying of molten plastic. When there is the potential for employees to come into contact with hot plastic, heat resistant gloves and sleeves (consider using the sleeves with thumb holes, they prevent the gap that sometimes occurs between the glove and the sleeve when the employee is reaching) should be made available.

With a little work and a lot of education, you can eliminate burns from hot plastic in your company.

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