

Machining of Polyurethanes: Safety Considerations

When performing any machining or other secondary operations on urethane, we recommend that all appropriate safety equipment as well as personal protective devices be utilized at all times. To fully address all of the safety issues applicable to a machine shop is beyond the scope of this paper. Good judgement and a thorough understanding of machining procedures is essential.

Eye protection should consist of approved safety glasses with side shields or full goggles. A full face shield is recommended whenever chip pieces or workpieces could fly out and strike the operator in the face.

In our coverage of fixturing and chucking of workpieces, we said too much hold pressure can distort the urethane and cause machining errors. Fixturing is an extremely important aspect of machining urethane. Never attempt to start

machining until you are positive that the fixturing is safe and secure. Improper fixturing during plunge cuts and contouring can cause the workpiece to come out of the machine and injure the operator or a bystander.

Loose machine parts, handles, hand tools, etc. should not be left on or near a machine during operations. If a ribbon-type urethane chip wraps back around the workpiece, these loose items can be caught or thrown and cause a serious injury.

CAUTION ! Excessive heat can be generated by improper machining practices. If smoke is generated by machining, the method must be immediately corrected. **DO NOT** inhale the smoke or grinding dust from urethane or any elastomer.

When grinding or sanding urethane and generating dust, a dust collector should be utilized. If this is not possible, the operator should properly don and wear an approved dust mask and be sure that a good face seal is achieved.