

Machining of Polyurethanes: Milling

Urethane ranging from 90A to 75D durometer can be successfully milled without much difficulty. Attempting to mill parts below 80A is not recommended. Tools must be sharp and the work must be fixtured securely.

Two-fluted end mills and single point fly cutters are preferred. Fly cutters would utilize high speed tool bits ground to a round nose. Speed of the cutter should be 900 to 1300 rpm. A feed rate of 15 to 20 inches per minute is a good starting point.

Milling is used on parts that are impractical or impossible to machine in a lathe. Milling is also used where close tolerances and a good surface finish are required.

Again, work should be held so that it is not deformed by excessive chucking pressure. Of course, work must be held securely enough so that it doesn't come loose during machining.