

Laser Steel Rule Die Life Expectancy:

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Below is a very “general” guide to Die life expectancy. It would be impossible to accurately predict the life of any die because of the variables involved in each case. There are a number of factors that can determine the life of any die:

1. Material thickness
2. Material toughness: (.010 polyester is harder to cut than .010 polycarbonate)
3. Material top coating: Certain thermal polyester top coatings are very abrasive and can decrease the life of a die significantly.
4. How intricate a design is. Small punches, tight radii and rule that is very close to each other can affect the life of a die.

Base line die expectancy:

Material: .010 polycarbonate

Adhesive: .002

Number of impressions: 30,000

Number of parts:..... 4 up die = $30000 \times 4 = 120,000$ parts

MSI die cuts using a polyester cutting pad to avoid the die’s steel rule from ever touching the metal plate of the cutting press. It is important that a die never strike the metal plate. This will dull the steel rule blades and cause the die to be out of tolerance.

A die may appear to still cut the parts in an acceptable manner but not be usable because the rule has been worn down enough to be out of tolerance. Dies cannot be re-ruled because a re-ruled die can not typically hold $\pm .010$ tolerances.

When a die is worn out the only alternative is to re-make the die and if needed re-submit die strike approvals.

Dies will be replaced at the customer’s expense unless MSI damages the die in the production process. If this occurs MSI will replaced the die at no charge.

Only a small portion of dies will ever get to the point of wearing out.