

# Leading Mold Shops Adopt RoyAlloy™ Stainless Steel for Improved Mold Base Tooling

For many years, EDRO Engineering and other regular users of pre-hardened stainless holder steels believed the standard 420F material needed improvement. Its main shortcomings included: a lack of toughness, unpredictable stability, inconsistent machinability, and poor weldability.


In response, EDRO Specialty Steels began an intensive research and development program in 1992. The goal was to develop a superior stainless mold base steel. After extensive metallurgical and machining tests,

the final product RoyAlloy™ was introduced and patented in 1996. RoyAlloy™ is a pre-hardened free machining 400 series stainless steel, developed specifically for improved plastics mold base tooling.

Today, RoyAlloy™ Stainless steel has become the preferred steel of choice, accounting for more than 70% of all pre-hardened stainless mold base plates sold in North America. RoyAlloy™ demonstrates significant improvements in all areas, with features including

enhanced machinability, improved stability, greater toughness, better weldability, and more consistent uniformity and hardness when compared with 420F.

Progressive ideas such as the development of the RoyAlloy™ product, together with an unparalleled commitment to service, have allowed EDRO to become a leader in the development and manufacture of quality mold steels to the plastics tooling industry.



*Five years ago, after extensive evaluation, we decided to change from the traditional 420F to RoyAlloy™ for all our stainless mold base plates. This major material change was made because of RoyAlloy's™ superior machinability. RoyAlloy™ Stainless also provides a more consistent and uniform product, with improved dimensional stability and surface finishes compared to the 420F type materials.*

**-Scott McWilliam, President, Ivanhoe Tool & Die of Thompson, CT**

*RoyAlloy's™ improved dimensional stability provides a reduction in our surface grinding and has significantly reduced our overall mold making costs.*

**-Jonny Netz, CNC Machining Manager, Rexam of Buffalo Grove, IL**

*We built a series of molds from 420F stainless that contained thin stripper plates. We had to regularly replace these thin plates because of cracking during production. Six years ago, after extensive evaluation, we changed completely to EDRO's RoyAlloy™ Stainless to replace cracked 420F plates.*

*We have not had a single RoyAlloy plate fail! RoyAlloy's™ improved mechanical properties and toughness have eliminated our recurring failures.*

**-J.D. Faulkner, Vice President of Operations, F & S Tool of Erie, PA**

# EDRO

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# RoyAlloy™

STAINLESS™

RoyAlloy™ Stainless is covered under U.S. Patents 6,045,633 and 6,358,334