



ESSIL 291 SILICONE MOULDING SYSTEM IN THE PROTOTYPING, VACUUM CASTING, AND LOW COST TOOLING MARKETS OF THE WORLD

INTRODUCTION

Essil 291 is sold globally via the Axson Technologies Subsidiary Network directly to these markets. Some 250 tons are sold annually mostly in conjunction with the successful PX Range of Polyurethane Vacuum Casting Resins to Prototypers and Manufacturers alike.

Essil 291 is a silicone system with 3 catalyst options;

291 Catalyst - for dry moulds, typically used for high quality lens work. Shore A 38.

292 Catalyst - a controlled 'oil bleed' version to add de-mould lubrication. Shore A 38.

293 Catalyst - slightly higher shore hardness version of 291, for RIM tools. Shore A 40.

ADVANTAGES

The Essil 291 formulation was developed to enhance the life expectancy of the moulds produced, specifically when used with the 'PX Polyurethane' systems developed by Axson Technologies, with some remarkable performance results.

Compared to the market standard silicone grades available, Essil 291 systems increase mould life yield by at least 25% for the PX521 HT (Clear lens work – ABS type) and PX223 HT (High temperature ABS type) and in some cases with simple contour parts up to 30%.



ESSIL 291/291 MOULD WITH PX521 ORNAMENT



ESSIL 291/292 MOULD WITH 310g WEIGHT PX527 PART

Further Developments with the new PX527 (Clear work horse ABS) has demonstrated Essil 291/292 specifically produces a mould life in excess of 40 – 50 parts.

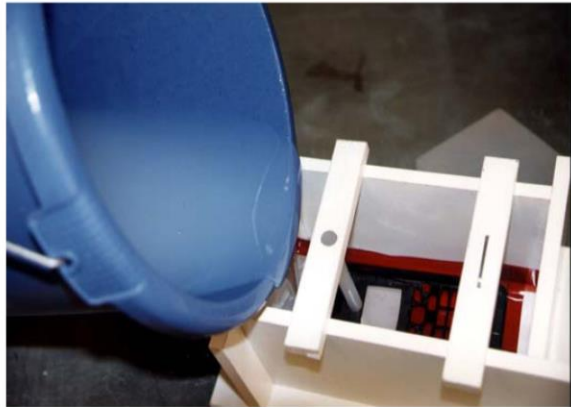
PROCESS

Being a low viscosity system, the resulting benefits to production are soon evident. The low viscosity discourages air entrapment when mixed, resulting in a quicker degas and release of air bubbles. Essil 291 is tolerant of most synthetic materials such as Sellotape, Superglues etc.

Essil 291 demoulds in 12 hours at 23°C but is usually cured at 40°C for this period. This is to cater for the expansion of the mould at 70°C during the cure of PX products thereby allowing for the resulting shrinkage of the PX products to give a correct dimension of the resulting part. Being a relatively fast curing silicone system, increased pot life can be achieved by using a Retardant 90 addition; however this is almost never required in the Industry which regularly sees moulds to 100+ kilos being produced.



ESSIL 291—EASY PROCESS



COST EFFECTION

ESSIL 291—EASY POUR

When comparing the cost of Essil to other similar products, the kilo price of Essil should be calculated with the improved yield factor this system affords against other silicone's yield rate.

Example; If both Essil and a competitor's product cost were £11.00 per kilo, and the competitor's silicone yields 25 parts before the mould expires, it actually costs £13.75 per kilo compared to Essil with its 25% increase in yield, having made 31 parts before mould expires.

Simply, the competitor's silicone would require 5 moulds to every 4 moulds made with an Essil system. This is a significant annual saving potential in any user's material bill.

PACKAGING

The Essil range is available in 20 kilo Resin pails with removable lids and 2 kilo can Catalysts. For bulk users the Resin is available in 200 kilo drums also with a removable lid. The catalysts are also available in 20 kilo cans.

The container dimensions are compatible with the main Dispensing m/c's available in Industry. The 200 kilo drum is polythene bag lined for clean disposal.

PLACE IN MARKET

Essil 291 sales continue to grow, (26% in 2007 over previous year) as more clients couple the chemical resistance benefits to the Axson PX range of Vacuum casting resins. In recent months the introduction of the PX527 low aggression formula makes the combination of Essil/PX527 an attractive market winner.