

## **BEC Partnership with Silclear**

BEC Group are pleased to announce a new partnership with silicone solutions provider Silclear. Local to BEC Group, Silclear have been designing and manufacturing silicone solutions for the dairy and medical industries for the past thirty years.

In contrast to BEC's plastic injection moulding techniques, Silclear uses compression moulding to manufacture the various tubing, valves and fittings they produce.

The process begins with a catalyst and pigment mixed into the silicone between two large rollers, forming a thick long slab of compound. The slab is then cut into the correct weight for a mould cavity, it is placed into a mould, heated and compressed between two plates to fill the mould and form the desired shape. Once formed, the silicone tubing is then cured in large ovens set at 200 °C for eight hours to destroy the remaining catalyst.

### **Why is silicone used?**

Silicone is used for certain purposes or environments over thermoplastics due to its properties such as flexibility, durability, heat resistant and non-reactivity- making it ideal for use in medical settings and around food.

Silicone can however be more difficult than thermoplastics to recycle, it is also more expensive to produce than its plastic cousin- in part due to the longer time it takes to cure it. Silicone also might not be rigid enough for certain environments- plastics are often chosen for specific attributes.

### **How will the partnership benefit customers?**

BEC and Silclear will be working together to allow both our customers to have access to components made from silicone, and vice versa.

Customers will also be able to create products made from both thermoplastics and silicone through the process of overmoulding. Overmoulding silicone onto thermoplastics (commonly polycarbonate, PET or nylon) involves the plastic injection moulding of the plastic, removing this from the initial mould and putting it into a second mould in which silicone is injected. It is often used in plastic handles, knobs, phone cases etc.

Silicone gives components the best of both worlds- the heat resistance, chemical resistance and flexibility of silicone and the rigidity of certain rubbers. It is ideal for medical products, consumer electronics and ergonomic products.

**Looking to manufacture in silicone or plastic? Get in touch via [hello@becgroup.com](mailto:hello@becgroup.com) or call 01425 613131**