



GLASSINSIGHT

Improving Performance In Production

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ask the expert...

TAKE-OUT INSERTS IN DUPONT™ VESPEL® SCP-5050 MATERIAL

PROCESS ADVANTAGES FOR CUSTOMERS IN HOT-END CONTAINER HANDLING



*Robin Lawrence,
Market Development /
Sales Engineer,
Pyrotek Inc.,
Milton Keynes, UK*

Take-out inserts are critical components in the container glass manufacturing process as highlighted here by Pyrotek's Robin Lawrence* as he answers typical customer questions.

Q: What are take-out inserts and what do they do?

A: Take-out inserts are the first parts to contact the newly formed hot glass containers after the final blowing stage in the finishing mould. At this point, the glass is still very hot and easily damaged. A pair of inserts closes around the neck of each container, lifting them out of the mould and transferring them to the deadplate, where the base of each container is cooled by air jets prior to being set down. The pick-up profile and finish of the inserts are custom designed to suit each particular container, having four main categories of crown, thread, underthread and bead.

Q: What is the DuPont™ Vespel® SCP-5050 material?

A: DuPont™ Vespel® SCP-5050 parts and shapes are custom designed and made from DuPont polyimide resins to combine the best characteristics of plastics, metals and ceramics. There are four key properties and advantages:

- Low thermal conductivity
- Low oil absorption
- High impact resistance
- High wear resistance

Q: How can the DuPont™ Vespel® material improve performance in take-out applications?

A: The unique material properties increase glass plant melt-to-pack ratios by delivering step-changing performance for hot glass ware handling, while minimizing physical and thermal checking. This material offers both longer insert life and also the potential to reduce scrap when compared to more traditional graphite insert materials.

Q: What has been the experience to date?

A: Many glass manufacturers have already experienced the step-changing performance improvements from using DuPont™ Vespel® inserts. Here are three case study examples.

CASE STUDY 1

A container plant in Brazil was using graphite take-out inserts and was experiencing production issues due to short insert life and thermal checking. By switching to DuPont™ Vespel® SCP-5050 material, this customer solved the thermal checking problems, reducing their scrap rate by 2–3%, and more than doubling the insert life.

CASE STUDY 2

A U.S. container manufacturer was suffering thermal checking from their graphite take-out inserts. After the introduction of DuPont™ Vespel® SCP-5050 inserts, the thermal checking was eliminated and their scrap rate reduced by 3–4%. Also, the service life of the inserts was three times longer.

CASE STUDY 3

A container producer in Mexico was using graphite take-out inserts, causing very short insert life due to breakage, resulting in process interruptions, reduced reliability, and high replacement costs. Using the DuPont™ Vespel® SCP-5050 material increased the average insert service life from two to 21 days!



For more information about DuPont™ Vespel®, contact your local Pyrotek sales engineer or visit www.pyrotek.info/vespel.

** Robin Lawrence is a Market Development / Sales Engineer with the Pyrotek Glass Division in Europe, based in Milton Keynes, UK. Robin has three years' experience in the glass industry with Pyrotek in both sales & manufacturing, and 15 years with Pyrotek overall. Robin has a degree in Metallurgy & Materials Science.*

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