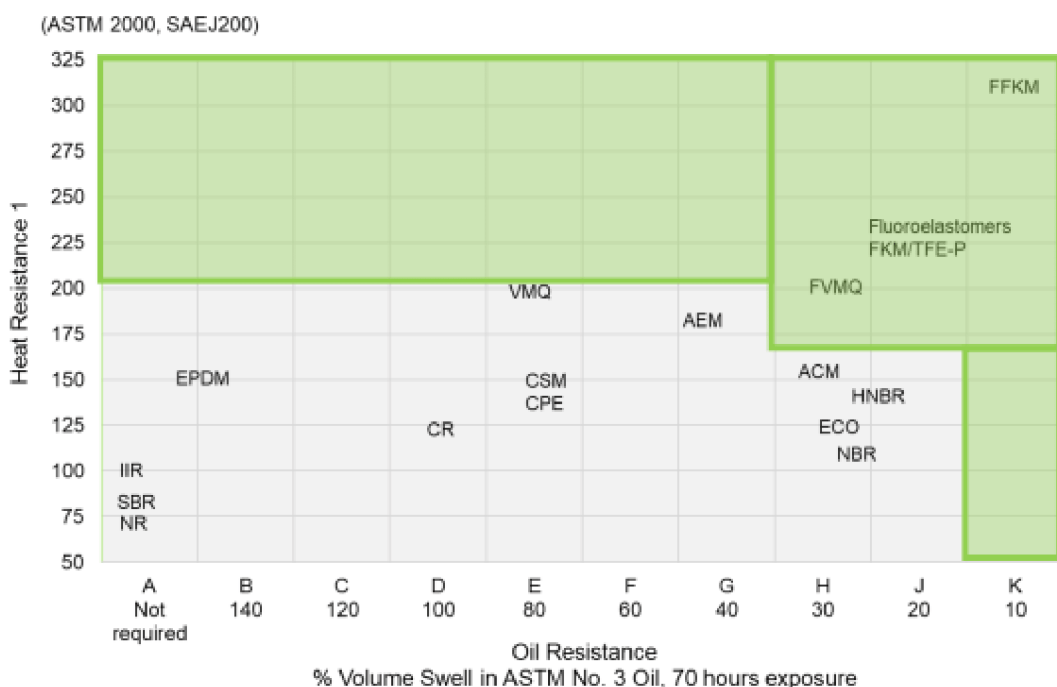


Scope or restriction option analysis.

Clwyd Compounders Limited do does not agree with the proposed blanket ban on all PFAS materials being categorised under the same title of being hazardous. We do agree that certain types of PFAS should be restricted and removed from the market.

Fluoro-polymers should be removed from this blanket ban from the basic principles of REACH that polymers are exempt from registration as they are shown to be intrinsically safe. The very nature of fluoro-polymers being extremely stable and not able to be broken down biologically or environmentally enhances their safety.

We agree that the processes to make fluoro-polymers need to reduce and or remove any PFAS chemicals that are hazardous and able to enter the environment and do harm such as fluoro-surfactants. The fluoro-polymer industry are already addressing this matter and changing their technologies to reduce such PFAS ingredients.



¹ Maximum temps at which vulcanizates can be aged for 70 hours with changes in tensile strength $\leq \pm 30\%$, elongation $\leq -50\%$ and hardness $\leq \pm 15$ points

The above chart is based on the ASTM D2000 classification of polymers and gives the relative heat and oil resistance of all the main polymer types. It is quite clear from this that fluoro-polymers are unique in their ability to withstand high temperatures and aggressive environments such as oils. There are no other polymer types in the top right hand corner of this chart apart from fluoro-elastomers.

The only other elastomer capable of reaching the types of heat resistance of fluoro materials is VMQ (Silicone rubber). However ECHA have already categorised the D4, D5 & D6 monomers used to make these materials as SVHCs and if the manufacturers cannot get the residual levels below 0.1%, then Silicone rubber could end up on the authorisation list. This would then remove one of the only possible options for certain applications where a substitution might be possible.

There may be options for substitution in some applications, where materials from other industries could be used. These other options would not be available to Clwyd Compounders Limited as our expertise and production facilities would not allow us to use them and the current technology in polymers does not offer any options for the loss of fluoro-elastomers.

Baseline

Fluoro-Polymer Type	Annual Volumes (t)	Industries supplied into
FKM	68.3	Oil & Gas; Military; Chemical; Automotive – High end (Supercars & F1); Medical; Aerospace
FFKM	0.5	Oil & Gas; Military; Chemical; Automotive – High end (Supercars & F1); Medical; Aerospace; Semi-con
FEPM	7	Oil & Gas; Military; Chemical; Electrical
FVMQ	2.5	Oil & Gas; Military; Chemical; Automotive; Medical; Aerospace; Electrical

Clwyd Compounders Limited supply rubber compounds to companies that vulcanise these compounds into components or finished parts for the various industries listed. We customise these compounds to offer the best performance in the processing of and end application use that our customers require. We also develop these compounds in cooperation with our customers to meet very demanding specifications and approvals. Some of these approvals can take years from first inception to full approval.

Other socio economic analysis (SEA) issues.

Since the early 1980's fluoroelastomers have been a mainstay of the business for Clwyd Compounders Limited. In our last financial year 2022 they were used in products that made up 42% of our €20m turnover.

If there was a complete ban, prior to valid alternatives being developed and approved in the critical applications we provide to (which currently there are none), this business would be lost. As a result our projected headcount would have to reduce by approximately the same %, approximately 30-32 people. However, we would also need to relocate to downsize our facility, this disruption could impact more of our customers.

We provide compounds utilising fluoroelastomer not only to the largest defence, aerospace and other blue chip engineering companies, who rely on the technology to enable pioneering technology. But to 100 plus small business in the UK and Europe, turning over sub €5million employing 1-49 people, who rely on fluoroelastomer products from us to enable their products to be market leading and their business to thrive.

As we are the premium custom rubber compounder, taking on all the most difficult jobs in industry these are all highly skilled jobs that take years of training to perfect, so these are all well paid jobs and the majority of those employed are the sole provider for local families.



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