

EU PFAS Draft Proposal

BCR Ad-Hoc PFAS Meeting 28/03/2023

Key Headlines:

- 1) Significant social impact due to loss of essential and safety related products in aerospace, defense, industrial, electronics, and transportation
- 2) Jobs will be lost in Belgium
- 3) Great economic impact to industries and companies in Belgium and broader EEA
- 4) Ask: Take action and support exemption and extended derogations



Significant social impact due to loss of essential and safety related products in aerospace, defense, industrial, electronics, and transportation

Segment	Industrial	Aerospace	Electronics	Transportation
Examples of Companies	Chemical plants	Engine manuf, airlines	Semicon fabs, OEMs	Automotive and component manuf
Applications and Impact Across Belgian Industry	Used in: • Chemical processing • Oil & Gas • Alternate energy Benefits: • Reliability • Efficiency • Safety Societal: Shut down most of the chemical plant as sealing most of the raw chemicals do require fluoropolymer. (Even the manufacturing of the non PFAS elastomer requires fluoropolymer seals). Water treatment may be jeopardized with no access to Chlorine dioxide. 3.4MM direct + 10.2MM indirect employee / 594 b€ turnover	Used in: • Jet engines • Airplane parts • Military & Defense Benefits: • Light weighting • Friction resistance • Temp. resistance Societal: This will prevent commercial, military, emergency rescue planes and helicopters to fly. 0.5 MM employee direct / 130 b€ for aerospace Air transport 4.7-5.5 MM employee direct + indirect / 110b€ for Air transport	Used in: • Semiconductors • 5G Networks Benefits: • Plasma resistance • Heat resistance • Cleanliness • Reliable and durable sealing Societal: This will ban the implementation of chip manufacturing in EU All cell phones contain fluoropolymer. Cell phone ban More than €43 billion of policy-driven investment will support the European Chips Act until 2030	Used in: • Cars, Trucks, Tractors/Heavy Equip. • Marine • Railways Benefits: • Light weighting • Friction resistance Societal: Fluoropolymer are used in all vehicles including EV. This will prevent cars, buses, trucks, railways to operate (13 MM employee EU manufacturing, services and construction)



MM = Millions

There is no alternative chemistry that achieves the same level of performance as fluoropolymers.



Science of Sealing, Wear & Friction	
SEALING Kalrez® Perfluoroelastomer Parts	WEAR & FRICTION Vespel® Polyimide & Composite Parts
Kalrez® resists more than 1,800 different chemicals while offering the high temperature stability 327 °C.	Vespel® retains mechanical properties at continuous temperatures of 320 °C and excursions of up to 600 °C. Maintains low wear and friction under high load & speed conditions. while resisting a wide array of chemicals.
	
Components last longer, reduce maintenance & operating costs and improve safety	

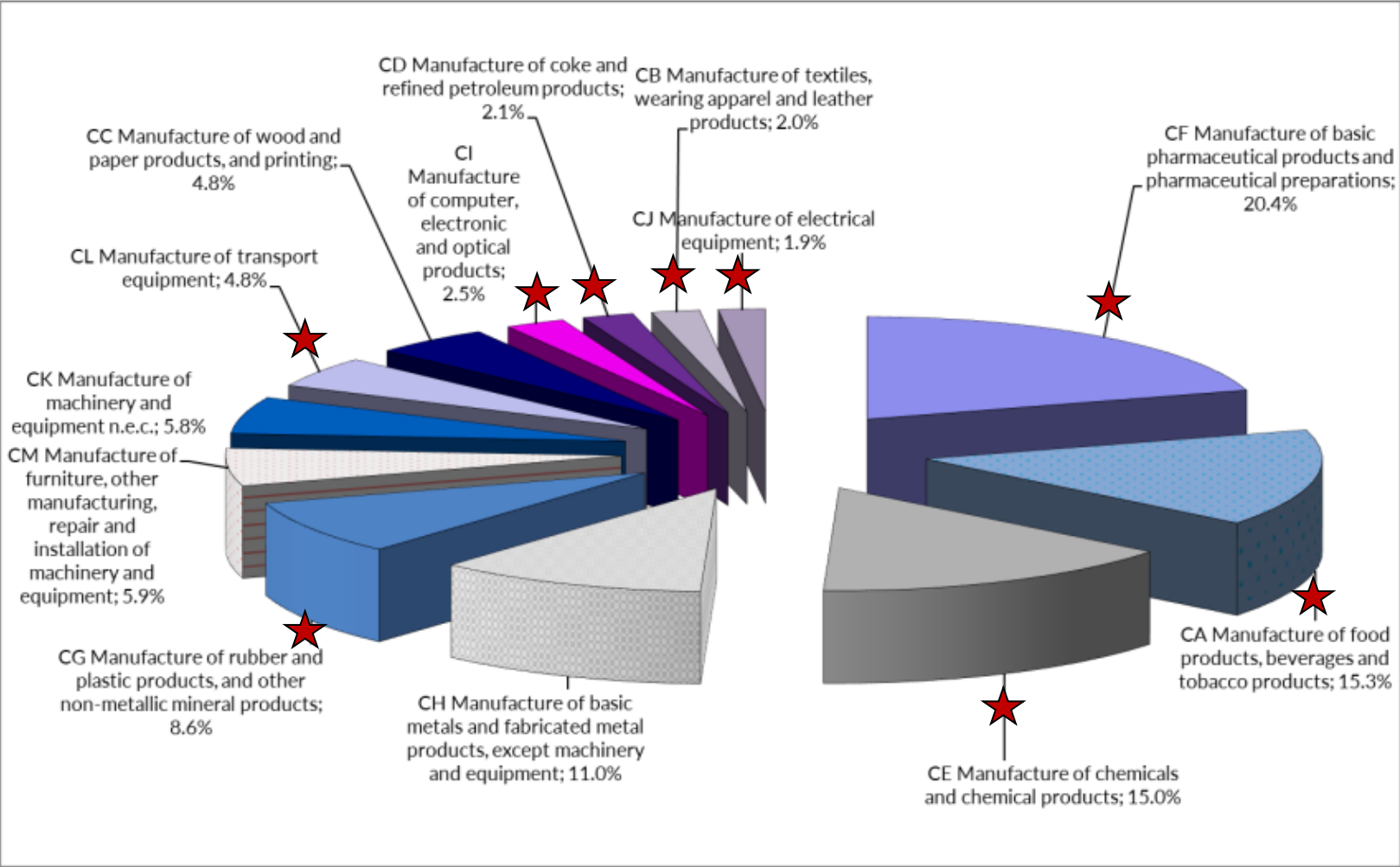


Examples: Kalrez® and Vespel® are Used in Mission Critical Applications



Belgian Industries That Rely on Fluoropolymers

Graph 2. Breakdown of the Belgian manufacturing industry in 2020
Gross value added as a % share of total value added of manufacturing industry.



★ Industries that use perfluoroelastomers (Kalrez®) and/or polyimides (Vespel®). Impact ~73% of Total



Source: National Accounts Institute (NAI) - Distribution per activity branches (A38).

The Impact to Belgium Will be High: Jobs

DuPont Manufacturing Site in Mechelen, Belgium



Antoon Spinoystraat 6, 2800
Mechelen, Belgium

Producing highly mission- critical Vespel® parts and member of community for more than 35 years in Mechelen with **60+ employees**

Impact if Site Shutdowns:

- Producing **20+ million parts** to leading industrial companies in EEA
- Serving more than **20 countries in EEA** and **10+ countries** outside EEA
- Serving **200+ customers** in aerospace, transportation, electronics and industrial. **Includes 11 sold-to companies** in Belgium
- **Loss of 60+ DuPont jobs in Belgium plus indirect impact**

DuPont Mechelen Site One Example of Belgium
Manufacturing Jobs to be Lost as a Result of ECHA Proposal



Summary of Impact and Requested Actions

Summary of Impact:

- There is no alternative chemistry that achieves the same level of performance as fluoropolymers.
- Expected to impact ~73% of Belgium industries
- Job losses in Belgium and EEA

Requested Action:

- Fluoropolymers, which include fluoroplastics and fluoroelastomers (considered as Polymeric PFAS), are used in mission critical applications and should be exempt from the restriction with reporting on emissions and a life cycle assessment annually.

At DuPont, we have systems, processes and protocols in place ensuring that PFAS is used safely, controlled to the highest standards and minimized. Additionally, where PFAS is used, we are actively working with our customers and academia to pursue alternatives where feasible.

