RED FLAG

GFL™
GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY

28 March 2023

# Ad-Hoc open BCR Meeting
# PFAS Restriction

# Fluoropolymers are safe: different from other PFAS

**Fluoropolymers are not harmful and pose no significant risk to human health or the environment**

- Distinct subset of PFAS, with unique toxicological properties:

*Biologically stable & chemically inert*

*Not soluble in water*

*Non-bioavailable*

*Non-bioaccumulative*

Non-toxic

- Fulfil the criteria established by the Organization for Economic Cooperation and Development (OECD) to be regarded as Polymers of Low Concern

# Fluoropolymers are safe: manufacturing & EOL

- ***During manufacturing:***
  - Today, majority of FPLs can be manufactured without the use of PFAS of concern through use of non-fluorinated polymerization aids.
  - Advanced abatement technologies significantly reduce emissions during manufacturing.
- ***At end of life:***
  - Incineration: thermally decomposed in incineration facilities. [RIVM, GORE, GFL]
    - no significant PFAS generation at temperatures > 850°C (Municipal WI)
    - Mineralisation at temperatures > 1100°C (Industrial WI)
  - Landfills: FPL waste is inert, non-toxic and not mobile. No threat to human health or environment [GORE]

# Fluoropolymers are indispensable

**FPLs are an integral building block of the modern world with unique properties that are essential for a wide range of societally beneficial applications:**

- Renewable energy
- Electric vehicles
- Semiconductors
- Chemical process Industry
- Transport
- Food and water treatment
- Pharmaceutical and medical devices

*Fluoropolymers are mostly used to keep us safe at the performance we need*

*Fluoropolymers are essential for the success of the energy transition and on-shoring of key technologies*

# Fluoropolymers are very stable – key to circularity

**To meet climate targets, the EU needs to move away from the linear economy**

**CIRCULAR ECONOMY DEFINITION (WBCSD)**

The circular economy is an economic model that is regenerative by design.
The goal is to retain the value of the circulating resources, products, parts and materials by creating a system with innovative business models that allow for renewability, **long life**, **optimal (re)use**, refurbishment, remanufacturing, **recycling** and biodegradation.

Ellen MacArthur Foundation circular economy principles:

- Design out waste and pollution
- **Keep products and materials in use**
- Regenerate natural

# Concluding…

- **Fluoropolymers:**
  - Are safe and very different from small molecule PFAS
  - Do not pose an unacceptable risk to humans nor the environment over their life
  - Are paramount to functioning of modern society across the globe
    - Key to reaching climate goals
  - Should be exempted from REACH regulation


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Thank you