Brussels, July 28th 2020

To Whom It May Concern:

3M appreciates this opportunity to participate in the Call for Evidence related to an evaluation of restriction options for PFAS. 3M is a global technology company with a diversified portfolio of solutions in healthcare, security, transportation, energy and communications in addition to its emblematic consumer products (Post-it® notes, Scotch® tapes). 3M has more than 20,000 employees, 40 manufacturing sites and 10 R&D centers in Europe.

3M understands these submissions will be carefully considered in the preparation of a REACH Annex XV Restriction Dossier by the competent authorities for REACH of Netherlands, Germany, Denmark, Sweden, and Norway. 3M is submitting information on its behalf and on behalf of all its associated legal entities subject to regulation under REACH.

3M is submitting various questionnaires in response to this Call for Evidence. 3M manufactures, imports, uses, and supplies various PFAS and PFAS containing products for numerous, primarily industrial, applications. 3M has submitted one separate questionnaire per line of products produced or used to ensure the information supplied is as clear as possible for the authorities.

The questionnaires have been divided as follows, aligned generally by product line and with input from various 3M reporting units, as listed below:

1) **3M Fluorinert, 3M Performance Chemicals and 3M-branded fluids** (by 3M Transportation & Electronics)
2) **3M Novec-branded fluids** (by 3M Transportation & Electronics)
3) **3M Fluoropolymers: Fluoroplastics Dispersions** (by 3M Transportation & Electronics)
4) **3M Fluoropolymers: Solid Fluoroplastics** (by 3M Transportation & Electronics)
5) **3M Fluoropolymers: Fluoroelastomers** (by 3M Transportation & Electronics)
6) **3M Fluoropolymers: Polymer Processing Additives** (by 3M Transportation & Electronics)
7) **3M Specialty Chemicals** (by 3M Transportation & Electronics)
8) **3M PFAS-enabled products: PFAS for Product Release Liners** (by 3M Healthcare, 3M Safety & Industrial, and 3M Consumer)
9) **3M PFAS-enabled products: PBSF-Enabled Fluorosurfactants - Acrylic Foam Tapes** (by 3M Safety & Industrial and 3M Transportation & Electronics)
10) **3M PFAS-enabled products: PBSF-Enabled Fluorosurfactants** (by 3M Healthcare, 3M Safety & Industrial, 3M Transportation & Electronics, and 3M Consumer)
11) **3M PFAS-enabled products: PBSF-Enabled Coatings** (by 3M Safety & Industrial, 3M Transportation & Electronics, and 3M Consumer)
12) **3M PFAS-enabled products: Other PFAS and PFAS Mixture Based Coatings** (by 3M Healthcare, 3M Safety & Industrial, and 3M Transportation & Electronics)

3M has supplied as much information as possible within the short timeframe of this initial consultation and informs the authorities that the condensed timeframe limited 3M's ability to provide as fulsome responses as it otherwise may have been able to. 3M concentrated its response on qualitative as opposed to quantitative information, which is subject to confidentiality and for some product lines will require additional time to be fully provided. 3M has marked its confidential business information as such

throughout its submission and looks forward to and is ready for additional opportunities to provide supplementary information.

In addition to the information provided by individual questionnaires, we would also like to take this opportunity to make additional comments on the scope of a potential restriction on PFAS:

- 3M is concerned that authorities may be seeking to adopt a very broad restriction that would cover all PFAS under a very broad definition that encompasses not only non-polymeric but also polymeric PFAS. Trying to restrict PFAS as one group of +/- 4700 substances with different chemical structures (e.g. polymeric versus non-polymeric, perfluorinated versus polyfluorinated, reactive versus non-reactive etc.) and physico-chemical properties (e.g. gas versus liquids versus solid, hazardous versus non-hazardous, etc.) is not scientifically appropriate.

- High molecular weight fluoropolymers, for example, are a class by themselves. They are considered according to the OECD assessment criteria[1] as 'polymers of low concern (PLC)' meaning being of low hazard to human health and environment, and therefore to be separated from certain other PFAS for hazard assessment or regulatory purposes.[2] Consequently, high molecular weight fluoropolymers should not fall under the scope of the REACH restriction currently under consideration.

- A restriction under REACH (Article 68) requires demonstration that the substances involved present an unacceptable risk to human health and the environment, and that the burden to demonstrate such risk is on the authorities. To date, however, the authorities have only pointed to Persistence (P) as support for a restriction. 3M asserts that Persistence on its own is not enough to assess or demonstrate an unacceptable risk to human health and environment and therefore to ban or restrict substances being manufactured, imported, or used in products, particularly in such a broad fashion. An overly narrow regulatory focus on Persistence only will undermine innovation, including to produce durable and high performing materials that may support societal sustainability goals.

- The restriction scope and the RMOA should also take into consideration that most PFAS are manufactured for industrial uses. The materials either are used as an integral part of the manufacturing equipment such as in semi-conductor manufacturing, chemical processing equipment, etc. or a functional part on the inside of complex manufactured articles such as medical devices, automotive, aerospace, electrical equipment & electronics. Most are manufactured in closed systems and under controlled conditions. PFAS-enabled articles have well controlled waste streams, including recovery and recycling (e.g. medical devices, automotive, electronics), so typically PFAS-containing materials in those uses would not add to the environment at the end-of-life of products.

- Article 68 of REACH requires authorities when adopting a restriction for substances posing an unacceptable risk to take due account of the socio-economic impact of the restriction, including the availability of alternatives. Applying the essential/non-essential use concept in the absence of a demonstrated unacceptable risk would mean that products would be banned on the basis

[1] e.g. high molecular weight, low residual monomers, low molecular weight leachables, low water solubility (very limited long-range transport), high stability, etc.
[2] ref. Henry, B. J., et al: 'A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers' (2018).

of unnecessarily intrusive judgements of what is good or bad for society, which is by nature relative and must remain evolutionary.

- Applying the essential/non-essential use concept should allow the use of substances when the benefits to society, including socio economic benefits, outweigh the demonstrated unacceptable risk, if any, and for which there are no equally performing, technically and economically feasible alternatives available. Such an analysis should also account for a life cycle assessment point of view.

- When considering essential uses of any PFAS that are demonstrated to cause an unacceptable risk, authorities should also apply the following criteria:

  - The standard for substitutes from the standpoint of environment and health must be the same as the standard applied to the substance considered to be substituted (here, PFAS).
  - Essential uses must be authorized until technically and economically suitable alternatives become available with also due consideration of the time required for companies to adapt their products and have such adapted products validated under applicable regulatory regimes.

The majority of PFAS uses today are in applications of high societal value and important to the functioning our modern life, i.e. electronics, automobiles, airplanes, solar panels, medical imaging, medical devices, medicines, buildings, and many others. 3M-manufactured PFAS products are used in many critical mainly industrial applications where they present significant socio-economic benefits and have no technically and economically feasible alternatives with equal performance.

3M would like to thank again the Dutch and German authorities for this opportunity to contribute information on the uses of this important class of chemicals and remains at their disposal to provide additional information as needed.

END