

Amphenol is one of the largest manufacturers of interconnect products in the world. The Company designs, manufactures and markets electrical, electronic and fiber optic connectors, coaxial and flat-ribbon cable, and interconnect systems. The primary end markets for the Company's products are communications and information processing markets, including cable television, cellular telephone and data communication and information processing systems; aerospace and military electronics; and automotive, rail and other transportation and industrial applications.

Regulation (EC) NO. 1907/2006 (REACH)

Proposal for a restriction of Per and Polyfluoroalkyl substances (PFAS)

Submitted by:

Amphenol Spectra-Strip and High Speed Cable Products

720 Sherman Ave.

Hamden, CT USA

Date: 9/20/2023

Dear Sir or Madam,

Amphenol Spectra-Strip is a manufacturer of high speed bulk cable products that are incorporated in Amphenol High Speed Cable Products. The Amphenol High Speed Cable Products are in multiple different applications, including data centers, interconnects between electronic equipment. In addition, Spectra-Strip provides high speed bulk cable to other Amphenol divisions for internal equipment applications.

The type of fluoropolymer used for the conductor insulation in the high speed cables include FEP and PTFE. These are considered Plastics of Low Concern (PLC) as they satisfy the recognized PLC polymer hazard assessment criteria that includes certain physicochemical properties like high molecular weight, insolubility in water/lipids and thermal, abiotic, and biotic stability. OECD (2009) Based on this the fluoropolymers should be exempt from the PFAS restriction.

The unique electrical properties of this subclass of PFAS are low dissipation factor and high heat stability which are properties that facilitate efficient signal transmission, reduced signal loss and heightened data integrity in elevated temperature environments.

The fluoropolymers, FEP and PTFE, are suitable for the various high-performance applications that include data transfer where higher operating frequencies and higher bandwidth is required. In addition, many of these applications experience a high temperature environment that non-fluoropolymers will not properly operate. The proposed restriction would affect this high-speed data transfer, power AI and "green economy" and many of the next generation of products including artificial intelligence, clean energy, and electric vehicles.

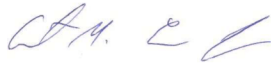
There are no material substitutions for the fluoropolymer in the high temperature environment. Polyethylene would have close approximation to the electrical properties but would increase in the size of the product. Increasing the size in this current world of downsizing applications is not the optimum product design method. Plus, polyethylene cannot operate in the same high temperature environment that fluoropolymers can operate and therefore cannot be used.

This lack of alternatives to the fluoropolymers may result in potentially hazardous, less durable substitutions making the known applications unable to meet the stringent safety standards. In addition, future improvements in infrastructure that require increased speed of electronic signal transfer would be severely affected. The economic impact to Amphenol would be over \$120 million and affect 1,000 Amphenol employees.

Amphenol Spectra-Strip and Amphenol High Speed Products understand the concerns in regard to the potential long-term effects of certain PFAS substances in the environment. Responsible manufacturing is a strong focus across all of Amphenol. But the fluoropolymers noted in this document are safe when used in their intended methods. Fluoropolymers have unmatched performance; they are inert, are not biodegradable, toxic, or mobile, do not dissolve in or contaminate water or generate microplastics, and cannot enter or accumulate in a person's bloodstream. Based on this information, fluoropolymers should be excluded from the substances of high concern. If they cannot be excluded, an extended derogation period needs to be extended without a formal deadline for the wire and cable fluoropolymer market until it is possible that acceptable substitutes are available.

If there are any questions, please do not hesitate to contact one of the undersigned.

Respectfully submitted.



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