The chairman of the Oxo-biodegradable Plastics Association (OPA) has blasted a proposed EU ban on oxo-degradable plastics, calling it a completely unprecedented manoeuvre.

The European parliament recently voted to ban certain single-use plastics and approved a Directive into which oxo-degradable plastics were added in what Michael Stephen, who is also deputy chairman of Symphony Environmental Technologies, calls a politically- and commercially-motivated late move.

“You cannot ban things without following a proper procedure,” he told Plastics in Packaging during a conference call. “We’ve got a QC’s opinion and are considering bringing an action in the courts.”

Oxo (indiscriminately targeting oxo-degradable and possibly oxo-biodegradable) plastics were added to the EU’s Directive despite the absence of a European Chemicals Agency (ECHA) report – requested by the European Commission – on the environmental impact of such materials. It is reported that the ECHA had found no evidence by October 2018 that oxo plastics form microplastics, and had requested an extension from the EC. However, the study was terminated in April and ‘oxo-degradables’ were added to a list of materials that are alleged to result in micro-plastics and to not properly biodegrade. This, claims Stephen, goes against the scientific evidence submitted by ECHA.

No such ban had been proposed in the Commission’s 2018 report, he added, and was also not included in the draft directive submitted to the Parliament and Council. This late addition in the Environment Committee of the parliament evades the established procedure for restricting products in Europe, set out in Arts 68-73 of the REACH Regulation, and sets a dangerous precedent in terms of law-making and accountability in the EU, he claimed. The instruction terminating the ECHA inquiry was co-signed on behalf of the Commission by Carlo Pettinelli, a member of the Board of the Bio-based Industries Joint Undertaking, which also includes a representative of Novamont, a large producer of bio-based plastics – which compete with oxo-biodegradable plastics.

Speaking about the current plastics agenda, Stephen commented that governments are redoubling their efforts in terms of recycling, redesign, and so on. “But they won’t be able to collect all the waste plastics. They have a blind spot,” he added. “But if you add a catalyst to a normal plastic then you accelerate the normal process of degradation and make it edible to bacteria if its gets into the open environment. It turns the plastics into a food source.”

Stephen says that oxo-biodegradable are designed for lower value plastics and that it makes little economic or environmental sense to recycle them. He explained, however, that they can be recycled without the need for separation.

While oxo-biodegradable technology is engaging success in countries including Saudi Arabia and the UAE, where government concluded that they could not prevent waste getting into the Gulf, little has been sold in Europe. The problem here, said Stephen, is a misunderstanding of the technology, and an unrealistic expectation (in the short- to medium-term) that we can get plastics litter down to zero.

“Developing countries need the technology as they do not have sophisticated waste-management, and we have good markets in Africa, Asia and Latin America. Growth applications include refuse sacks, shrink wrap and food packaging,” he said.

Eunomia conducted a study into the environmental impact of oxo-degradables in 2016 and found inconclusive evidence on a number of claims. It found evidence to support the claim that Pro-Oxidant Containing (PAC) plastics do not biodegrade in landfill (Stephen says they are not intended to), but labelled as “inconclusive” the evidence that PAC plastics biodegrade in marine environments, that they are a possible solution to the reduction of marine litter when compared with conventional plastics, and that they do not promote a throwaway attitude.

The Eunomia report said that PAC plastics cannot be identified in collection or recycling systems, and that the quality of conventional plastics could be negatively affected by PAC plastics being added to the feedstock. It claimed that one of the biggest issues confronted by both policy makers and the PAC plastics industry when deciding on limits and controls is that there are no unified standards. Stephen said that the universally accepted standard in the industry is ASTM D6954.

Stephen commented that confusion is caused by failing to distinguish between oxo-degradable plastic (which fragments but does not biodegrade except over a very long time) and oxo-biodegradable plastic (which has a different chemical structure and becomes biodegradable much more quickly). There is also confusion if you fail to distinguish between biodegradable plastics designed to biodegrade in an industrial composting facility, and oxo-biodegradable plastics designed to biodegrade in an open environment (where oxygen and bacteria are abundant).