Bioplastics NEWS

Plastiphobia, Microplastics and A Throw-Away Society

We have a new column on Bioplasticsnews.com, The Michael Stephen Column. Michael shares his thoughts and opinion on important issues that are impacting the bioplastics industry. Today he writes about Plastiphobia, Microplastics and a Throw-Away Society.

Michael Stephen

Plastiphobia

A new word entered the English language in 2019 – Plastiphobia!

This describes the emotional reaction against plastic which spread like wildfire when David Attenborough's "Blue Planet" programme appeared on the BBC.

Environmentalists and politicians leapt instantly to ban plastics all around the world – but they are making a mistake.

Plastic is actually the best material for a wide range of everyday uses, and is much the best for protecting our food from contamination and preventing food-waste and disease.

It also has a much lower global-warming potential than other materials used for packaging according to LCA's performed by Intertek.

Plastic is made from a by-product of refining oil, which is extracted to make fuels, and these fuels would be made whether plastic existed or not, so plastic is not itself causing any depletion of fossil-resources.

When the plastic becomes waste, its calorific value can be used to generate heat and electricity if, instead of being sent to landfill or unsuitable for recycling, it is sent to modern, non-polluting, thermal-recycling units.

The only problem with plastic is that it can lie or float around for decades if it gets into the open environment, and this is the reason for plastiphobia, but this is a problem which can be solved without depriving people of plastic.

Of course, nobody wants to see plastic floating around in the oceans, and everybody wants to see better waste-management – but we know that this will not solve the problem for many years – even in the developed world.

The scientists who invented plastic designed it to be durable, but they soon realised that this very durability would cause a problem if the plastic gets into the open environment as litter.

They therefore found a way to make the molecular structure of plastic dismantle automatically by oxidation when it had served its purpose, and they called this new type of plastic oxo-biodegradable.

It is made from ordinary polymers, but the manufacturer of the product adds a catalyst to the polymer mix which accelerates oxidation if it becomes litter in the open environment, so that it becomes biodegradable much more quickly than ordinary plastic – yes, it really does!

It is not too late for the plastics industry to wake up and start using oxo-biodegradable technology for all short-life products and explaining it to politicians before their businesses are destroyed by plastiphobia and their employees lose their livelihood.

This type of biodegradable plastic is already in use all around the world to a limited extent, and can be made by existing plastics factories at little or no extra cost, with no need to change their machinery or workforce.

In some countries legislation has made it compulsory, because it is the only way to protect the environment against plastic waste which cannot realistically be collected.

Remarkably however in Europe the EU has moved to ban certain degradable plastics – without any finding from their own scientists, the European Chemicals Agency, that there is any cause for concern.

This legislation may serve the commercial interests of powerful companies who have lobbied for it in Brussels, but it does a grave dis-service to Europe's environment.

More of this extraordinary business in the EU in future editions of this column.

Microplastics

Microplastics are tiny pieces of plastic, which are being found on land, in the sea, and now even in the air we breathe.

They are created by the fragmentation of ordinary plastics caused by the effects of uv light and mechanical stress.

The problem is that although these plastics are fragmenting, their molecular weight remains too high for biodegradation, so they persist in the environment, getting smaller and smaller over a period of many decades.

The answer to this problem is to use oxo-biodegradable technology, so that if they get into the open environment the molecular weight of the plastics will rapidly reduce and they will cease to be plastic.

They will then have become a source of nutrition for micro-organisms, who recycle them naturally, back into nature.

"A Throw-Away Society"

This is a clever catchphrase which is frequently used to justify attacks on plastic bags.

However, there is nothing wrong with a throw-away society provided that the throwing is done responsibly.

We no longer have the kind of lifestyle to which our grandparents were accustomed.

We live at a much faster pace, we are much more mobile, and for most of us it is not practical to shop at the corner-shop.

Even our grandparents lived in a throw-away society as paper bags used to protect their food were not re-usable and were usually thrown away.

We now have new, low-cost materials, including plastics, which can be re-used many times, and then thrown away when no longer required.

Because some of the throwing is not done responsibly we need oxo-biodegradable plastic. As to recycling of plastics – see next week.

Happy New Year !!

Michael Stephen

Michael Stephen is a lawyer and was a member of the United Kingdom Parliament, where he served on the Environment Select Committee.

When he left Parliament Symphony Environmental Technologies Plc. attracted his attention because of his interest in the environment.

He is now Deputy Chairman of Symphony, which is listed on the AIM market of the London Stock Exchange, and is the founder and Chairman of the Oxo-biodegradable Plastics Association.

Earlier Postings in this Column

- 7/ 1/ 20 – **Recycling, Lab Testing, Bangladesh and the Right Bioplastic**
- 14/1/20 – **Plastiphobia and Bioplastics Definitions**

Interview with Michael Stephen

- **Questions and Answers on OXO-Biodegradability**

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