Is fibreglass recycling eco-friendly?

Short answer: Yes, to varying degree – and funding issues stand in the way.

Two factors come into play here: The waste hierarchy and EU directives.

You doubtless are aware of the pressing environmental problems of our planet so I won’t bore you with repeated info. More interesting, you probably heard the term ‘waste hierarchy’ already. Generally speaking and regarding all types of waste on our planet, that term describes the desirable hierarchy of actions when it comes to minimise harmful (side-) effects of our waste production. So the following order of appearance is the order of preference:

Waste minimisation, reuse, recycling, incineration with energy recovery / composting and incineration without energy recovery / landfill.

Where on that scale does fibreglass recycling fit in? Wherever reuse, recycling methods or incineration are possible without further harmful side-effects. A great read on this specific topic is offered by the article Recycling glass fibre reinforced composites – history and progress, written by Stella Job.

The article make some especially interesting points describing how various instances meanwhile did identify technically viable methods for fibreglass recycling (the cement kiln route currently being one method favoured by the European Composites Industry Association). Yet the roadblock here appears to be on the economic side – and also logistical: It appears that far too few.

What else pushes a fibreglass recycling as eco-friendly as possible is a set of EU directives. Most recently discussed of these is of course the Recreational Craft Directive 94/25EC – but others are relevant here, too. Quoting UK based Network Group for Composites in Construction:

“EU directives such as End of Life Vehicles (ELV) and Waste Electrical and Electronic Equipment (WEEE) will put more pressure on solving FRP waste management through recycling and reuse. The ELV directive states that by 2015, 85% of ELVs will have to be reused or recycled (excluding energy recovery), with only 10% incinerated with energy recovery, and only 5% going to landfill1. Whilst this new legislation does not impact on the construction industry, currently in negotiation is the proposed EU recommendation on Construction and Demolition Waste, which if adopted will have a significant effect. FRP suppliers could lose their market share to metal and other industries if they cannot ensure that their FRP components can be reused or recycled at the end of their life.”

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