



FRP recycling in progress - KiMuRa-route

In Finland we have a national system that provides a possibility to get composite waste to be fully utilized as raw material in cement kiln co-processing. KiMuRa-route started with the waste from the composite industry but nowadays also boats and windmill blades have been successfully utilized.

KiMuRa-route has successfully demonstrated a composite recycling logistics from Finnish composites industry (production waste) to full utilization in co-processing in cement industry.

To the challenges solved during developing the KiMuRa-route belong:

- sorting the waste to separate the appropriate fraction suitable for KiMuRa (composite industry)
- organizing the transportation of composite waste fraction to dedicated locations (composite industry)
- developing processes of circular economy actor: crushing and shredding technology and dust control (Kuusakoski Oy)
- defining rules for industry to sort suitable fractions for cement industry (Finnsementti Oy)



The KiMuRa-route was demonstrated as a project supported by the Ministry of Environment in 2021-2022. The key actors are still committed in running this recycling and the number of companies involved has more than doubled during KiMuRa. In future, the crushed composites bulk can be utilized also in processes other than cement kiln co-processing whenever such recycling/recovery technology would be industrially available.

This map shows the situation in the beginning of our recycling exercise. Today more than 30 composite companies are taking their production waste into recycling via KiMuRa-route.

In addition to the companies composite recycling development is supported by

Finnish Plastics Industry Federation
Finnish Marine Industries Federation Finnboat
Finnish Wind Power Association

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