



# ISOPREP™



## About Us

ISOPREP developed a method for the solvent-based recycling of end-of-life polypropylene using a waste carpet feedstock into virgin quality polypropylene, rendering it completely suitable for re-use in high value applications. ISOPREP is a multidisciplinary consortium made up of 9 partners located across Europe in Turkey, Germany, Austria, Portugal and the UK. The project is funded by the European Union's Horizon 2020 research and innovation programme.

[ISOPREP.CO.UK](http://ISOPREP.CO.UK)



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## RECYCLE POLYPROPYLENE FROM CARPET WASTE

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 820787



# BENEFITS

# ISOPREP PROCESS

# TARGET MARKETS

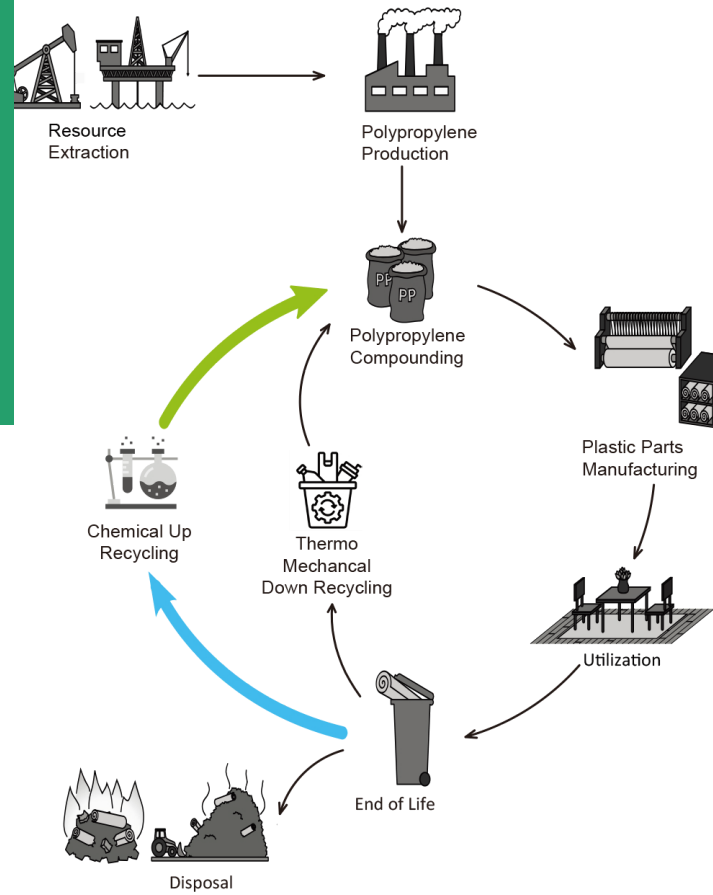


## REMOVE CHEMICAL AND PROCESS HISTORY OF POLYPROPYLENE IN CARPET WASTE

### ISOPREP technology produces virgin quality polypropylene (PP) from waste carpets

- achieves performance identical to PP resin freshly manufactured from fossil sources
- is cost effective compared with producing PP from fossil sources
- reduces the reliance of PP production on fossil resources
- achieves a step reduction on life cycle emissions and energy compared with the use of fossil resources
- is entirely closed loop with negligible loss of solvent per cycle and hence negligible emissions thus non-polluting
- the solvent is non-toxic and non-flammable in the process temperature range
- removes dyes, colours and impurities

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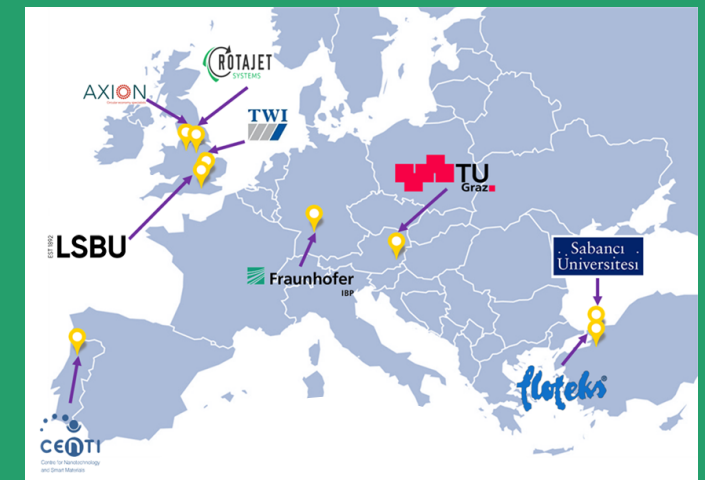


The ISOPREP process combines both mechanical sorting and chemical recycling. This combinational approach allows us to take end of life carpet and extract virgin quality polypropylene that is suitable for high end use.

The mechanical sorting step involves washing, separation of the carpet backing and then shredding and grinding the carpet to smaller fragments. In the chemical recycling step, an environmentally friendly ionic liquid is used to dissolve the polypropylene and separate it from dyes, additives and other contaminants.

- Carpet Industry
- Automobile Interiors
- Food and Beverage Packaging
- Consumer Goods Packaging
- Electronics
- Construction Materials
- Home Furnishings
- and More...

ISOPREP has a multidisciplinary consortium, represented by 9 partners, across 5 different countries.



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