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impact solutions
delivering value in petrochemicals & plastics

polymer & contaminate identification

At Impact Solutions we are an independent testing, R&D and consultancy laboratory, equipped with the Thermo Scientific iS10 FTIR spectrometer combined with the ATR attachment. We offer immediate solutions to our customers who want to obtain a full and accurate plastic identification of their products.

Every day we use FTIR to analyse products, and undertake plastic identification from the Recycling Industry and Moulders.

We are also equipped with a latest technology Differential Scanning Calorimeter (DSC). FTIR results are coupled with the results of the DSC yielding remarkable qualitative and quantitative details on the plastic additives and purity.

What makes Impact unique from other laboratories is that analysis of the results is being conducted by polymer technologists and scientists with more than 40 years of experience in the plastics petrochemical and recycling industries. At Impact we do not just provide test results, but also provide ideas and suggestions on how to achieve the best value for your products and how to make the plastic industry more environmentally friendlier and safer.

We take great pride in our customer service and believe your success measures our success.

Contact us today on info@impact-solutions.co.uk to find out how we can deliver value to you.

Fourier Transform Infra Red (FTIR) spectrometer

- for polymer, additive & contaminate identification
- Capable of analysing solids and liquids

Differential Scanning Calorimeter (DSC)

- Quality of recycled material
- Melting & crystallisation behaviour
- Oxidation stability (OIT)
- Chemical reaction rates
- Heating/cooling rates of up to 500C/minute
- Temperature range of -40C to 600C

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the many ways to identify polymers

In the world of polymer identification there are many techniques, all of which tell you different charactaristics of the polymer. Impact Solutions have years of experience running these types of tests and are ideally skilled to interpret the results.

Fourier Transform Infra Red (FTIR) spectrometer

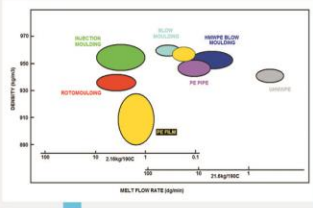
Here we find out the type and the presence of additives , degradation, or contaminents

Differential Scanning Calorimeter (DSC)

Gives information of melt temperture & tells us about the processing history & stability

While we now know the type of material...

...what processing method was it indended for?



Melt Flow Rate & Density

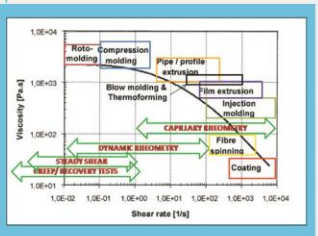
MFR gives an indication of the viscosity & processing of the material.

but if the MFR & Density match, does that mean my plastics are identical?

NO!!!

Rheology

- Understand the behavior of the plastic relevant to the conversion process
- Quantify the response of the material



- Use data to predict performance of the polymer in actual processes and for computer model simulation
- Relate molecular structure to the rheological response of the polymer.

Molecular Charactarisation

By using this technique you can pinpoint the charactaristics of a plastic, and an indication of its real world performance. We can accurately fingerprint a polymer, including catalyst type.