

The client

The client is an **established manufacturer of specialty industrial products**. Some of their products have a laminated structure consisting of multiple layers of different materials, hence recycling can be a challenge. To address this, they are looking at replacing some of the materials in their laminates with alternatives that would provide the functionality required, while allowing for easier end-of-life recycling. In response to this challenge, the client has successfully developed a new product with enhanced recyclability that utilises **Ultra High Molecular Weight Polyethylene (UHMWPE) film / tape**. They now wish to source a supplier that can manufacture this material for them at scale, to the required specifications, so that it can be incorporated into their commercial products.

The search

The client is actively searching for a **UHMWPE film / tape that can meet the following requirements:** -

- Thickness of around 50 µm
- Minimum tensile strength of 2 GPa
- Modulus of material of at least 200 GPa (preferably as high as possible)
- Width of around 3 cm but open to larger widths if it can be cut into the size needed
- High thermal stability
- Pure and oriented UHMWPE (i.e. no UHMWPE-fibers embedded in LDPE or any other binding-material)

Current applications for such material grades include ballistic protection / armour, aerospace and automotive engineering, industrial ropes, etc. The client is open to exploring other PE-based or high molecular weight materials that would meet the requirements above.

Ideally, the potential partner would have the following capabilities: -

- In-house R&D team and facility to support product customisation
- Willing to provide client with consultancy services, and advise on technology
- Ability to customise specific properties (e.g. crystallinity)
- Ability to supply volumes of 100,000 kg per year within the next 2 years
- Ability to coat UHMWPE film / tape on both sides as that would be very helpful with the client's assembly process, however, this is not essential

What the client can offer

The client is a large and well established business with excellent market access. They are searching for technology partners and suppliers to meet their current and future product demands, and so this represents an excellent business opportunity for a new and ongoing commercial relationship.

Please provide details of any potential technology partner or service provider to Diane Kolonko via diane@strategicallies.co.uk