



A. Schulman Inc. Ltd.

Technical Data Sheet

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POLYBATCH[®] DEG 68 UK

POLYBATCH[®] DEG 68 UK is a masterbatch which degrades Polyethylene under the influence of light and heat. The addition of 2 to 3% **POLYBATCH[®] DEG 68 UK** will produce a photochemically and thermally degradable film.

Polyethylene containing **POLYBATCH[®] DEG 68 UK** will not degrade before being exposed to UV light. Once the Polyethylene has been exposed to UV light, the degradation reaction will be triggered and continues even in the dark. It will be accelerated by heat.

Once the Polyethylene has been transformed into a fine powder, many studies have shown that biological degradation will take place. The end products of biodegradation will be Carbon Dioxide and water, with a very small residue of non-toxic inert mineral material. Biological degradation can start when the molecular weight has been drastically reduced and when the surface area of the disintegrated plastic has been enlarged.

The residues of degraded Polyethylene are NON-TOXIC.

PHYSICAL PROPERTIES :

Carrier	PE
Specific Gravity (g/cm ³)	± 0.92
Bulk Density (g/l)	± 0.550
Moisture Content (%)	< 0.15
Colour	Light Brown pellets

USAGE :

POLYBATCH[®] DEG 68 UK contains active metal ions embedded in LDPE. Degradation starts only after the metal ions have been activated by exposure to a UV light source.

The degradation speed is mainly dependent on:

- the concentration of **POLYBATCH DEG[®]**
- the thickness of the film
- the type of resin
- the presence of antioxidant and pigments
- the temperature
- the type of exposure

For mulch application, only practical tests can determine the amount of **POLYBATCH[®] DEG** that is required.

Practical tests must be performed to determine the optimum resin selection.

PACKAGING :

POLYBATCH[®] DEG 68 UK is packed in Polyethylene bags on shrink-wrapped pallets. It should be stored inside for no longer than 6 months.

FOOD CONTACT:

The active ingredients of **POLYBATCH[®] DEG 68 UK** are approved for use in food contact applications according to directive 2002/72/EC.

This information is based on the results of tests carried out in our laboratories, and is correct to the best of our knowledge. We recommend that users establish for themselves that the material performs satisfactorily for their own requirements. Quoted test results cannot be used as specification limits, but are typical test values intended for guidance. No liability is accepted by us from any damage, injury or loss resulting from the use of this information, and freedom from patent rights must not be assumed.