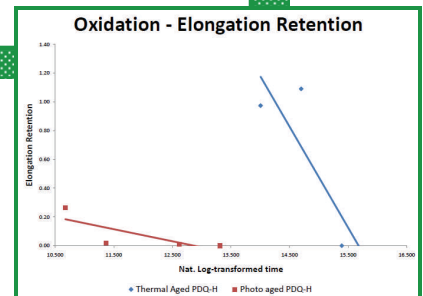
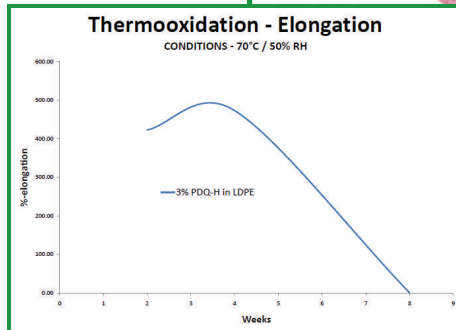


# DATA & TEST RESULTS



## PDQ-H

### PDQ-H

**PDQ-H** is a non-starch based additive. It is non-toxic and contains no regulated heavy metals. **PDQ-H** is currently being used in food contact applications worldwide.

**PDQ-H** uses the oxo-biodegradation process to completely breakdown the plastic. Time, ambient heat, and/or UV light will oxidize the plastic. The process of oxidation reduces the molecular weight and allows for carbonyl groups to form within the polymer, allowing microorganism to further biodegrade the polymer once it has been disposed of.

### ADVANTAGES OF USING PDQ-H

- **PDQ-H** is an additive; only 3% or less by weight is required for loading
- **PDQ-H** can be used in clear film
- Moisture is not a problem with **PDQ-H**
- Degradation rate can be adjusted by increasing or decreasing the loading
- No process changes are required when using **PDQ-H**
- **PDQ-H** is aggressive in degrading multi-layer film

### PDQ-H ORDER RECOMMENDATION

1% to 3% mixed with your resin

Color: clear

Result: Disintegration through oxidation and Biodegradation through microbial assimilation

#### Definitions:

*Degradation* is the chemical, physical and/or biological process which leads to the disintegration of the plastic.

*Disintegration* is the change from an intact PE film into fragments of various sizes; complete visual disappearance and destruction of the chemical components of the plastic are not necessary.

*Biodegradation* is the breakdown of organic materials by microbial organisms into smaller compounds. This is accomplished through metabolic or enzymatic processes. Frequently, the final product is carbon dioxide.

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### PRODUCT SPECIFICATION SHEET

#### PHYSICAL PROPERTIES

Form: Cylindrical Pellet

Color: Dark Purple

Base Resin: Linear Low Density Polyethylene

Density: <1

Melt Flow Index: 22 gram/10 minutes (20 - 25 gram/10 minutes)

Melt Temperature: 120°C - 125°C

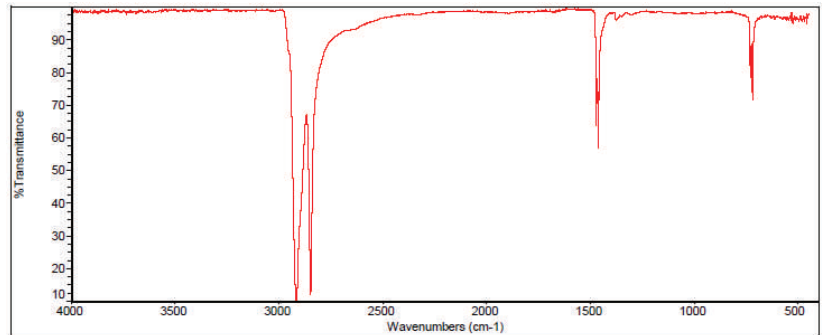
Typical Loading in Film: 1 - 3% by Weight

Typical Loading Injection Molding: 1 - 8% by Weight

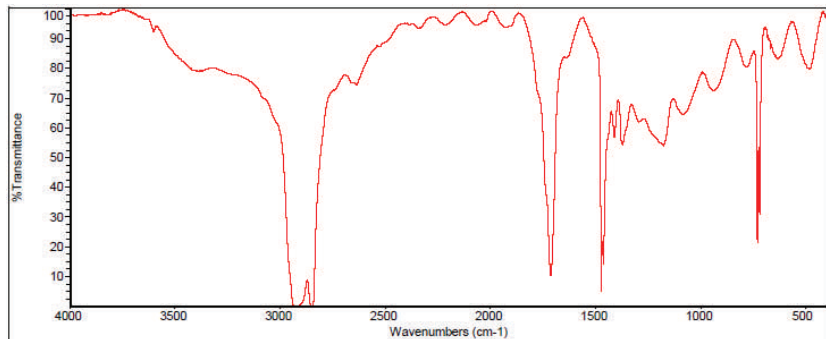
Storage Conditions: Cool, Dry and Out of Direct Sunlight

Handling: Non-Hazardous, Non-Toxic, Use Good Housekeeping Practices

#### **FT-IR Analysis**



Standard LDPE film, unaged



3% PDQ-H in LDPE aged 8 weeks @ 70 C / 50% RH

Films made with 3% PDQ-H have been tested and found to be safe for food contact applications. PDQ-H® contains no regulated heavy metals. All raw materials used in the manufacture of PDQ-H® are listed by FDA in CFR21 as "Generally Recognized as Safe for Use in Food Contact Applications".