



Excellence in Color

Biodegradable Concentrates

Chroma Biodegradable additive for Thermoplastic polyolefin resins

- FDA Sanctioned and RoHS directive compliant masterbatch
- Technology that initiates a natural process to return plastic back to nature
- Masterbatch modifies the thermoplastics properties for enhanced degradation and then bio-assimilation.
- Use in small percentages from 1%-4% depending on part thickness and type of polyolefin. Our testing has concluded that high density polyethylene degrades faster than polypropylene.
- Masterbatch has a 6 month shelf life.



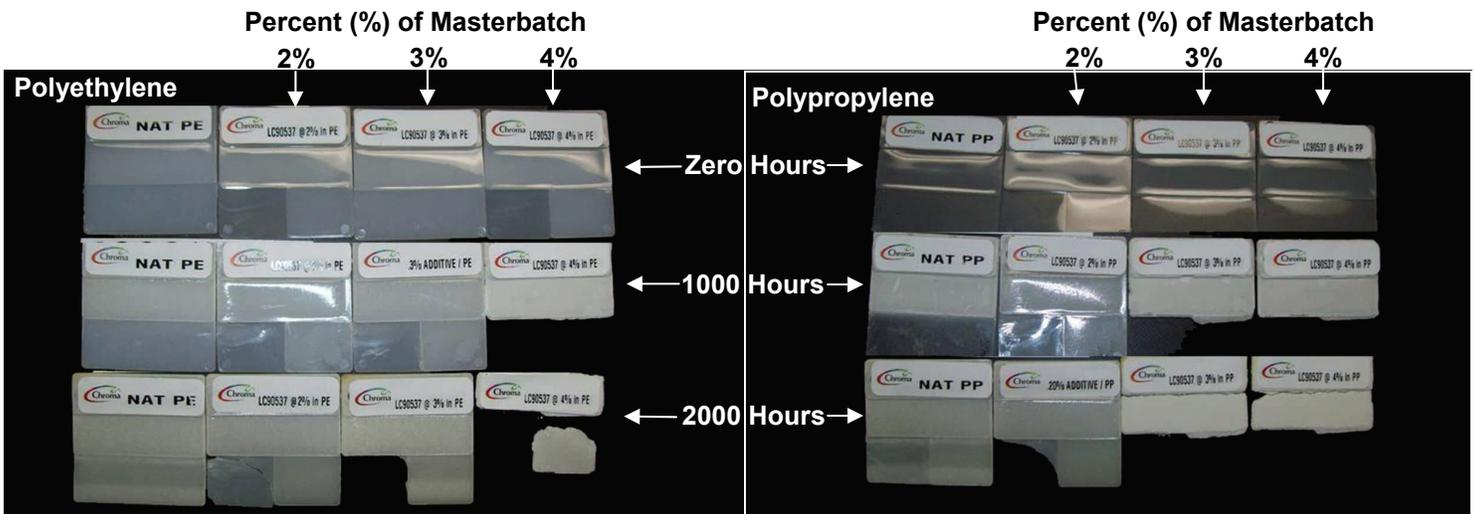
Overview

Epidemic– Recent EPA studies conclude that every year 31 million tons of plastics is newly introduced into the municipal waste stream, and the amount is growing. Less than 7% of plastics are recycled. Chroma Corporation is offering a new masterbatch that allow plastics to biodegrade. This technology initiates a natural process to return plastics to nature.

Performance

The new master batch is formulated for use in polypropylene, and polyethylene,. The concentrates can be used at 1% to 4% based on the thickness of the part. This masterbatch is made with ingredients that are FDA sanctioned and RoHS directive compliant.

Color should have no effect on the degradation process. The masterbatch has a six month shelf life. Molded parts shelf life is dependent on exposure environment and amount of masterbatch used.



Chroma Corporation, Inc.

3900 W. Dayton Street, McHenry, IL 60050

Main: 815-385-8100 ~ Customer Support:: 877-385-8777 ~ Fax: 815-385-5580

www.chromacolors.com

Technical Specifications

Biodegradable Concentrates

How it works:

Lowers molecular weight of Polymer compounds to allow quicker oxidative bonding. Uses naturally occurring elements, such as sunlight or heat and oxygen to initiate the oxidative degradation of high molecular weight polymer chains into low molecular weight compounds that can be further aerobically degraded in the natural environment to produce water, carbon dioxide, and biomass.

| Chroma's Programmable Life Biodegradable | Other PLA type resins |
|---|---|
| Byproduct of energy sector | Made from starch and other food products |
| Can be recycled | Damages recycling stream |
| Can be composted | Compostable |
| Can be made from recycled plastic | Cannot be made from recycled material |
| Can use same machinery as for conventional plastic | Needs special machinery |
| Suitable for use in high speed machinery | Not suitable |
| Same strength as conventional plastic | Weaker than conventional plastic |
| Same weight as conventional plastic | Heavier |
| Leak-proof | Prone to leakage |
| Time to degrade can be set at manufacture | Cannot be controlled |
| Degrades anywhere on Land or Sea | Degrades only in high-microbial grade environment |
| Emits CO2 slowly while degrading and forms biomass | Emits CO2 rapidly while degrading |
| Inert deep in landfill | Can emit methane deep in landfill |
| Production uses no fertilizers, pesticides or water | Production uses fertilizers, pesticides or water |
| Cost efficient | 4 or 5 times more expensive than conventional plastic |

Chroma's Product Offerings:

LC90537

Formulated for injection molding and thin wall injection for use in all polyolefin's (PP, PE, etc.)

CC90559

Formulated for blown or cast film, sheet extrusion and blow molding in all polyolefins (PP, PE., etc.)

PLEASE CONTACT CHROMA'S CUSTOMER SUPPORT DEPARTMENT FOR ADDITIONAL INFORMATION.



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