

---

## Weathering Whites

---



**Ampacet's Line of Weathering Grade White Masterbatches Provides Stability for Outdoor Applications.**

## Summary

Titanium dioxide ( $\text{TiO}_2$ ) is the most important white pigment used in the polymer industry.  $\text{TiO}_2$  is commercially available in two crystal forms—anatase and rutile. The rutile pigments are preferred for use in polymers over anatase pigments, because they scatter light more efficiently, are more stable, and are less likely to catalyze photodegradation.

Few commercial grades of titanium dioxide are pure  $\text{TiO}_2$ . Most have treatments deposited on the surfaces of the  $\text{TiO}_2$ . These surface treatments provide improvements in one or more performance properties of the pigment. Ampacet uses highly treated  $\text{TiO}_2$  to make a line of white masterbatch products with exceptional weathering characteristics for use in outdoor applications.



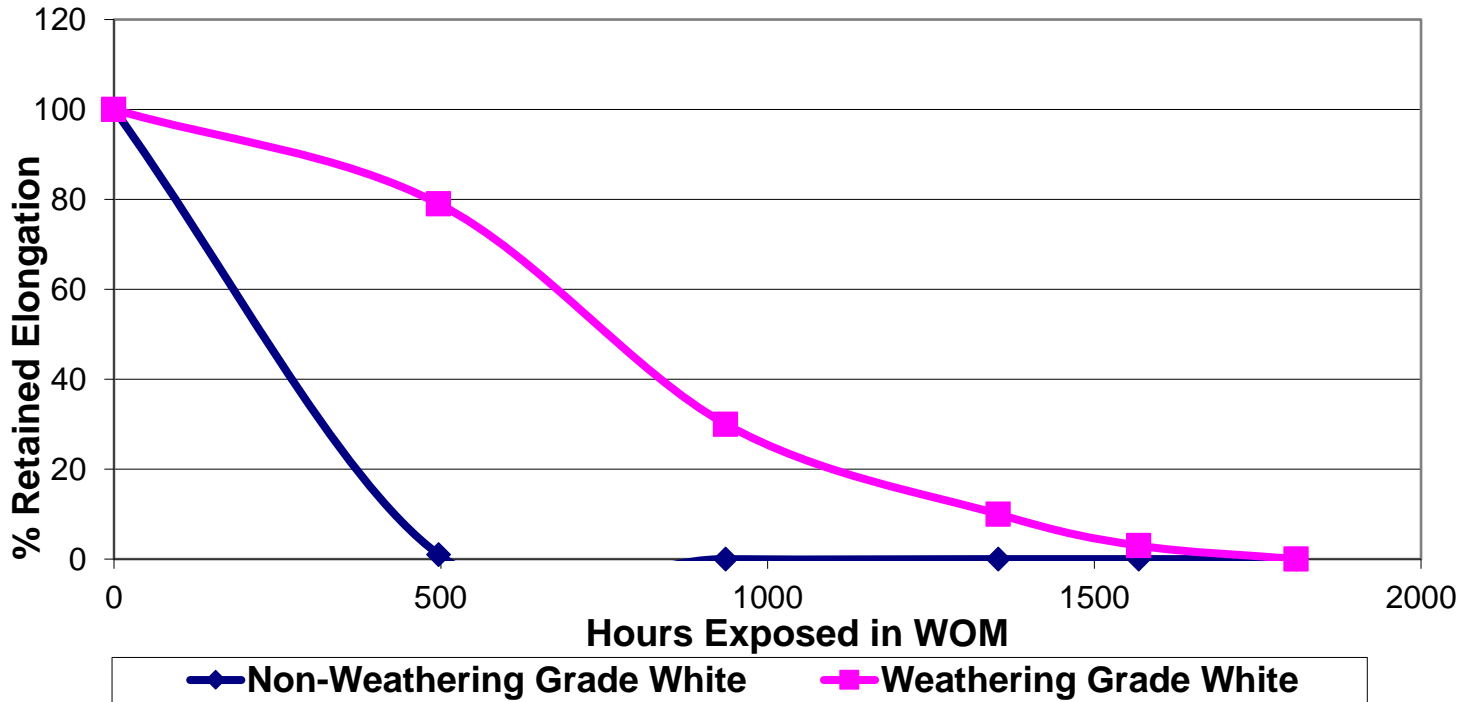
Weatherability of plastics is the phrase that describes the ability of a plastic part to maintain appearance and functional value during outdoor exposure. Whiteness retention, gloss retention and chalking are critical attributes when defining the weatherability of a plastic part. Ampacet's weathering grades of white masterbatch yield white products that will maintain color and gloss better, and chalk less, than white products made with standard  $\text{TiO}_2$  masterbatch.

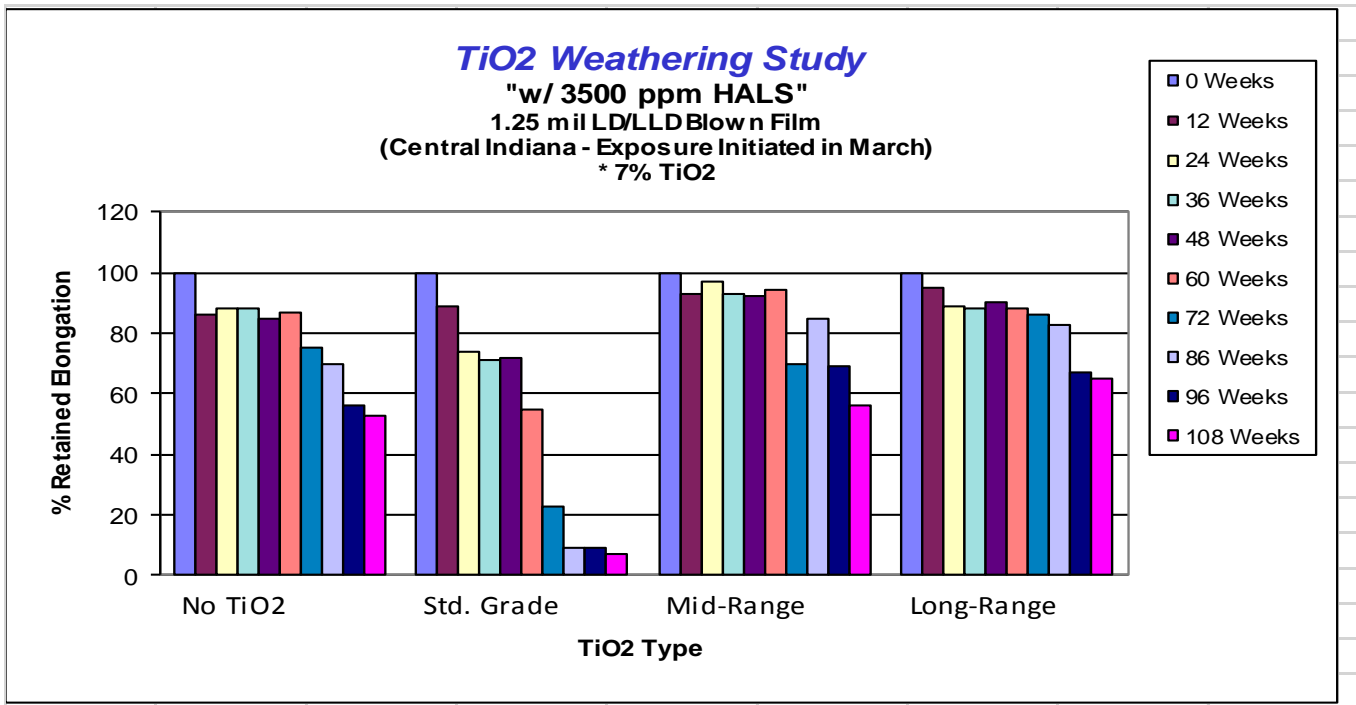
Weathering grade white masterbatch can also help maintain polymer integrity during exposure to the sun's harmful ultraviolet rays. The graph below demonstrates how film made with weathering white masterbatch maintains strength better than film made with standard  $\text{TiO}_2$  during UV exposure.

## Weathering

Weathering grade white masterbatch can be used in conjunction with Hindered Amine Light Stabilizers (HALS) to achieve the best possible weatherability results for an outdoor product. The chart below demonstrates the synergistic effect of combining a HALS with a weathering grade white masterbatch.

**Weathering Grade VS. Non-Weathering Grade White  
1.5 mil unstabilized white films in LDPE**





## Products/Codes

Production Code	Resin	Loading	Application	LDR	Carrier
110607	PP, HDPE	70%	Outdoor	2.0% - 2.0%	LDPE
112122	PP, HDPE	70%	Outdoor	2.0% - 4.0%	LDPE
110456	PP, HDPE	50%	Outdoor	4.0% - 6.0%	LLDPE

For more information on **Weathering Whites**, its uses and complete Regulatory Status, contact your Ampacet Account Executive or visit [www.ampacet.com](http://www.ampacet.com).

The information and recommendations contained in this document are based upon data collected by Ampacet and believed to be correct. However, no warranty of fitness for use or any other guarantees or warranty of any kind, expressed or implied, is made to the information contained herein, and Ampacet assumes no responsibility for the results for the use of products and processes described herein. No liability whatsoever shall attach to Ampacet for any infringement of the rights owned or controlled by a third party in intellectual, industrial or other property by reason of the applications, processing or use of the aforementioned information or products by the buyer.

Ampacet Website: [www.ampacet.com](http://www.ampacet.com)

**Global Regional Headquarters:**

Ampacet North America: 660 White Plains Road, Tarrytown, NY 10591-5130

Ampacet South America, S.A.: Dardo Rocha 2454 – 2o Piso, (B1640FTH) San Isidro, Buenos, Aires, Argentina

Ampacet Europe, S.A.: Zoning Industriel Riedgen, L-3451 Dudelange, Luxembourg

Ampacet Asia: Eastern Seaboard Industrial Estate (Rayong), 64/19 Moo 4, Highway 331, Pluakdaeng, Rayong 21140

