

Expect More from your Thermoplastic

- Optimized composition for reflectivity and durability
- All-weather optics system that performs in wet/dry conditions
- Optics design optionally incorporates both surface and intermix for durable reflective performance
- Unique microcrystalline 1.9 and 2.4 index ceramic beads
- Application via standard thermoplastic trucks

Thermoplastic is the most commonly used durable pavement marking in the world: it's inexpensive and easy to apply. However, thermoplastic users often must make trade-offs in terms of wet-weather visibility and retroreflective performance.

Trade-off #1: Lines disappear in rain

Glass beads available today are effective in dry conditions. But add water and their performance is severely limited. Water disrupts the glass bead optical system, preventing effective retroreflection. The net result: Drivers lose their most important guide in navigating the roadways. Although this is always important, on rural roads pavement markings may be motorists' only visual cue.

Trade-off #2: Thermoplastic has lackluster retained optical performance

Thermoplastic is classified as a durable pavement marking and generally has multiyear road presence performance. Historically, however thermoplastic markings have suffered from lackluster retained retroreflective performance.

SOLUTION: 3M™ *All Weather* Thermoplastic

3M *All Weather* Thermoplastic has been developed to minimize the trade-offs agencies must make in using thermoplastic markings.

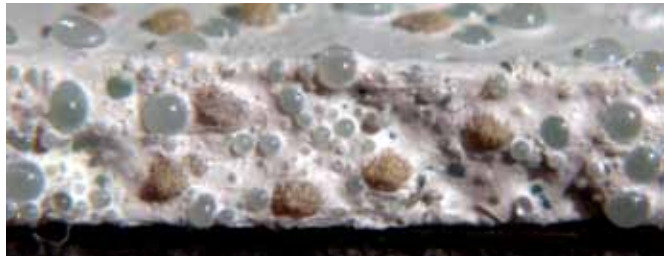
Enhanced visibility:

3M *All Weather* Thermoplastic contains a unique dual-optics system that enhances dry and wet reflectivity. As weather conditions change, the wet or dry reflective components automatically take over the task of providing retroreflectivity That enables 3M *All Weather* Thermoplastic to provide guidance to motorists in *all weather* conditions.

Key features:

- 3M “elements” with 1.9 index microcrystalline beads provide optimal reflectivity in *dry* conditions. Uniquely designed for the challenge of tough long lasting performance they are the most efficient dry reflecting optics available today.
- 3M “elements” with 2.4 index microcrystalline beads and high efficiency pigments provide reflectivity under wet and rainy conditions In fact, they actually improve their retroreflective efficiency when covered with water!

- Microcrystalline bead structure and element design maximize durability of the optics. The 1.9 and 2.4 index beads on the 3M *All Weather* elements are the only truly durable high index beads available today.



High Performance Optics In Intermix

For the highest level of performance, 3M offers an all weather thermoplastic that incorporates reflective elements and beads in the intermix as well as the surface drop to ensure maintained retroreflectivity. 3M also offers two other options for users seeking initial retroreflectivity but who are less concerned about retained performance.

	AWT with Intermix Elements	AWT with Type 3	AWT
Reflectivity Performance			
Initial all weather	x	x	x
Retained wet/dry	x		
Retained dry	x	x	
Intermixed Optics			
All weather elements	x		
Type 3 glass beads	x	x	
Type 1 glass beads	x	x	x
Surface optics			
Element double drop	x	x	x
Standard thermo equipment	x	x	x

Durable High Quality Formulations

As you would expect from 3M, our *All Weather* Thermoplastic is formulated to maximize durability as well as provide outstanding initial performance. 3M quality assures predictable performance and maximizes the investment you have put into your marking system.

Easy Application

Think of 3M *All Weather* Thermoplastic as the next generation of durable liquid markings. You don't have to have exotic equipment for application. Conventional thermoplastic equipment equipped with double drop capability can apply the product quickly and efficiently.

3M Technical Assistance

As always, 3M offers customized customer training and technical assistance. If you would like to learn more about durable 3M *All Weather* Thermoplastic, contact your 3M Sales Representative or call 1-800-553-1380.



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