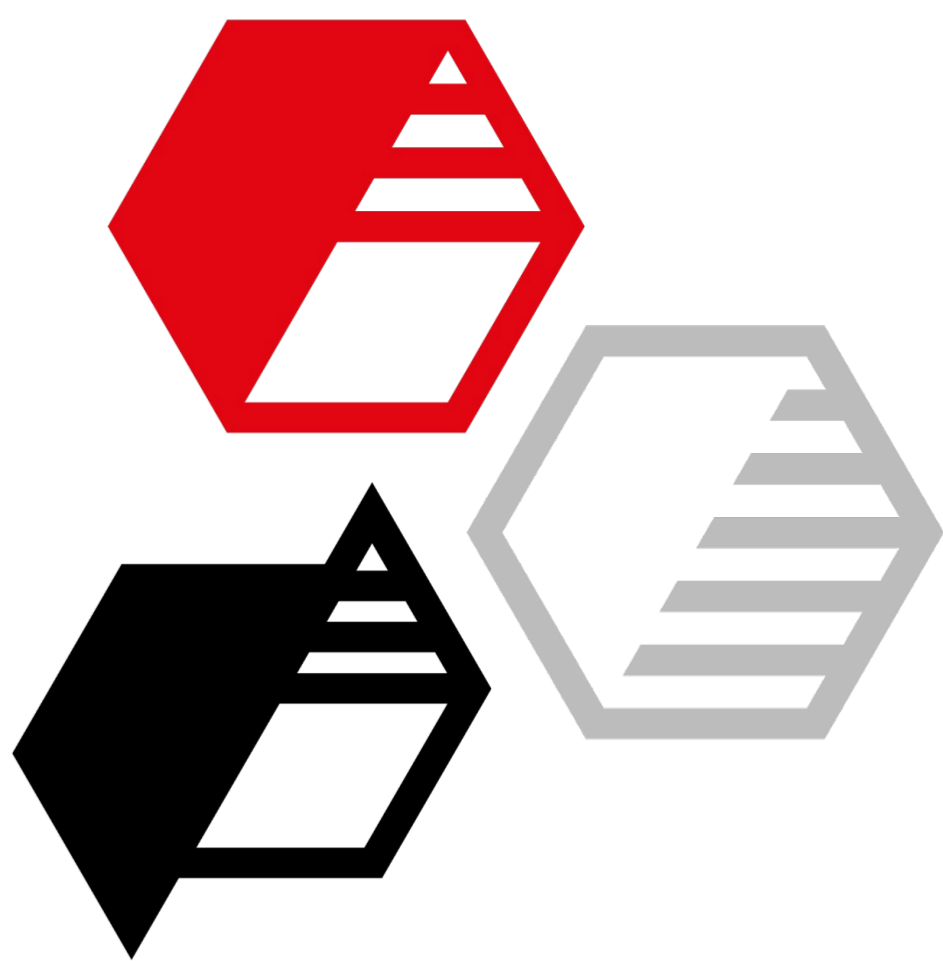


Neuburg Siliceous Earth in white thermoplastic road marking paints



Objective

Cost saving through substituting titanium dioxide by Neuburg Siliceous Earth (NSE).

Formulation

Typical HOT MELT ROAD MARKING white formulation with C5 resin, plasticizer, PE wax and calcium carbonate.

	Control	Neuburg Siliceous Earth (NSE)
Titanium dioxide	100 %	70 – 80 %
Sillitin Z 89 or Silfit Z 91	-	20 – 30 %

The exchange ratio is 1:1 by weight. Due to a higher oil number and a lower density of **NSE** compared to the pigment, the extension will lead to a slightly higher viscosity. In many cases producers tend to increase the melting temperature to achieve better flow properties after extension. However, higher temperature will lead to resin degradation and therefore yellowing of the product. To overcome flow issues it is recommended to slightly increase the plasticizer and/or wax concentration. There is no need of increasing the melt temperature.



Results and Summary

The best price performance standard product is **Sillitin Z 89**, for highest brightness the calcined commodity **Silfit Z 91** is most suitable. Substituting up to 30 % titanium dioxide with **NSE** in white hot melt road marking paints leads to a clear cost reduction. Additionally a tendency towards better adhesion of the glass beads and an improved abrasion resistance can be expected.