

SINAR

Reboundable Delineators



 **Durability**

 **Flexibility**

 **Impact Resistance**

 **Visibility**





Feature

Made of Thermoplastic Polyurethane (TPU) specially formulated by Bayer Material Science. It has superior physical properties in **tensile strength, impact** and **elongation resistance** which provides excellent reboundability features.



Anti-Fungus

The Sinar 500 is made with **Hydrolysis-stabilised and anti-microbial** feature which preserves the delineator's bright fluorescent colour and prevents the delineator turning black caused by fungus attack.



UV Protected

It exhibits good hydrolytic stability, good heat, oil and fuel as well as solvent resistance besides **UV protected** and excellent light fastness against sunlight and UV exposure.



Durability

The delineator is able to withstand multiple hits and runover. Under normal wear and tear and normal vehicle hits, the life span of the delineator is 12 months for SINAR 300 and 36 months for SINAR 500.



Impact Resistance

The one piece injection molding method provides greater impact resistance and greatly reduces damage on the delineators when impacted.



Flexibility

The SINAR reboundable delineator will return to their original position after every impact, therefore eliminating the need for re-straightening. It can withstand the direct hit and rolling by vehicles from any direction.



Visibility

Fluorescent Yellow or Fluorescent Orange for higher daytime visibility and **Reflexite®** High Impact RPS 2000 reflective sheeting is used for better nighttime visibility.

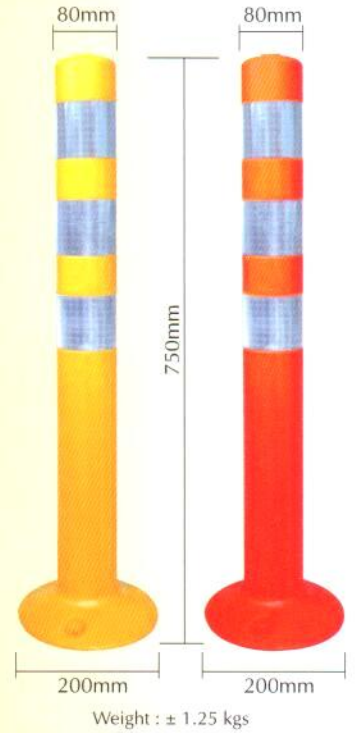


Material Data Sheet

Ester-based thermoplastic polyurethane (TPU) is designed for injection molding. It offers cold-flex resistance at low temperature and excellent mechanical properties.

Properties	TEST	METHOD UNIT	SINAR
Shore Hardness	ASTM D-2240	Shore A	19 ± 2
Density	ISO 1183	g/cm ³	1.20 ± 0.02
Ultimate Tensile Strength	ASTM D-412	MPa	500
Elongation @ Break	ASTM D-412	%	575
Tensile Stress @ 100% Strain	ASTM D-412	MPa	7.8
Tensile Stress @ 300% Strain	ASTM D-412	MPa	14.7
Tear Strength	ASTM D-624	kN/M	110
Abrasion Resistance	DIN 53516	mm ³	25-35
Hydrolysis-stabilised	SINAR 300		YES
Anti-microbial	SINAR 500		YES

SINAR REBOUNDABLE DELINEATORS



Suitable for various applications!



Diverging Lanes



Merging Lanes



Motorcycle Lanes



Bus Lanes

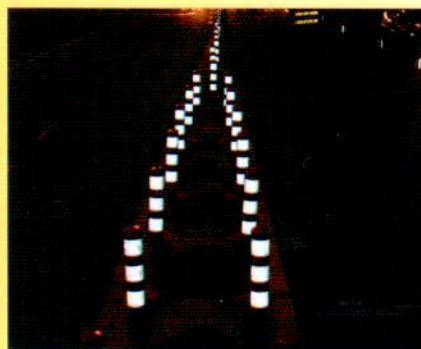
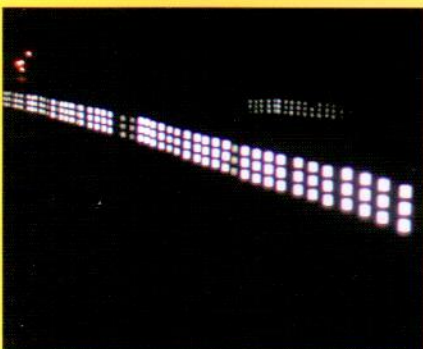


School Zones



Expressway Tollgates

Highly reflective at nighttime.



High Impact RPS 2000 Sheeting Data Sheet (70mm x 10.5" x 3pcs Silver Colour Sheeting)

Reflectivity

Relexite[®] High Impact RPS 2000 Sheeting is a tough and weather resistant, designed for rugged outdoor use in the reflectorization of reboundable delineators used in the roadway. It shall not measure less than the values shown in the following table, when measured in accordance with ASTM E810-94 and rotation angles of 0° and 90°.

Coefficient of Retroreflection (Candelas/Lux/Square Meter)		
Observation Angle	Entrance Angle	White
0.2°	- 4°	700
0.2°	+ 30°	400
0.5°	- 4°	160
0.5°	+ 30°	75

Common Product Failures!



Other reboundable delineators are not able to withstand multiple hits.



When exposed to harsh weather conditions, other reboundable delineators turn black due to fungus attack.

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