

Technical Datasheet

Description

REFLOMAX GLODIAN™ Flexible HIP is Reflective material which is made by microprismatic retro-reflective film. Flexible HIP is flexible, highly reflective, weatherproof, self-adhesive films with excellent corrosion and solvent resistance. The product was specifically developed for the manufacture of traffic control and guidance signs, warning, construction/work zone and information signs, which are intended for medium-term outdoor use.

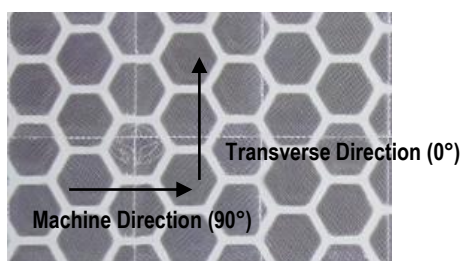
Reflective

REFLOMAX GLODIAN™ Flexible HIP series exceeds the minimum performance requirements of ASTM D4956 Type IV. The required minimum retroreflection values, shown in tables 1, are complied with when measured in accordance with the corresponding specifications using CIE54:1982.

Adhesive

REFLOMAX GLODIAN™ Flexible HIP has a pressure-sensitive adhesive that is recommended for room temperature application. Room temperature application is defined as 18°C (50°F) ~ 25°C(50°F).

Film Logo Pattern



Application/Processing

REFLOMAX GLODIAN™ Flexible HIP was especially developed for traffic sign applications. Substrate to which the material will be applied must be thoroughly clean. The substrate must be free of dust, oil, fats, silicon or other contamination. REFLOMAX GLODIAN™ Flexible HIP is optimized for application onto flat substrates of aluminum alloys or galvanized steel. For other applications, the user is fully responsible for evaluating the suitability of the product, and for any risks associated with that use.

Note

All REFLOMAX GLODIAN™ products are manufactured within an ISO 9001:2015 controlled manufacturing environment.

Product Data

Retroreflectivity for new sheeting (cd/lx/m²) as per ASTM D4956

Table 1 – Specific coefficient of retroreflection (ASTM D4956-17 Type IV sheeting)						
Observation angle	0.1°		0.2°		0.5°	
Entrance angle	-4°	30°	-4°	30°	-4°	30°
white	500	240	360	170	150	72

Daytime color specification limits

Table 2 – Chromaticity coordinates (ASTM D495)									
Colors	1		2		3		4		Luminance Factor (Y %)
	x	y	x	y	x	y	x	y	
white	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329	> 27

Nighttime color specification limits

Colors	1		2		3		4	
	x	y	x	y	x	y	x	y
white	0.475	0.452	0.360	0.415	0.392	0.370	0.515	0.409

Application Instruction

Processing instructions

This application instruction is to explain proper ways to apply REFLOMAX GLODIAN™ Flexible HIP series to traffic sign. Even though it is impossible to explain all aspects that need to be taken into account, this application instruction comprises a large number of useful tips for handling REFLOMAX GLODIAN™ Flexible HIP series.

The sign producers who will use REFLOMAX GLODIAN™ Flexible HIP series should follow this application instruction to produce their signs in right way for traffic sign according to the following standards : ASTM D 4956 Type 4, KS T 3507 Type 4, AS/NZS 1906.1:2017 Class400, EN12899-1 Class RA2, GB/T 18833 Class 4, GOST 32945 Class 2, JIS Z 9117 Type 2-A-a & 2-A-b.

Also, specific knowledge and skills of sign produces are prerequisites for the processing of REFLOMAX GLODIAN™ HIP-4000/4100 series.

Size & Packing

Roll Size	123cm x 45.7m (48.4in x 50yds)
Packing Size	1,290mm x 215mm x 220mm (50.79" x 8.46" x 8.66")
Net Weight	31 kgs (68.3lb) per roll
Gross Weight	29 kgs (63.9lb) per roll

Storage and Transportation

- 1) REFLOMAX GLODIAN™ Flexible HIP is supplied in cartons specially made in consideration of roll sizes.
The roll should be stored in the original carton with standard spacers that we provide. These spacers minimize formation of pressure marks and surface damage which can be caused by impact from outside.
Please make sure that partly processed rolls should also be stored in the same condition as suggested above.
- 2) REFLOMAX GLODIAN™ Flexible HIP should be stored in a cool, dry indoor area that is protected from direct sunlight.
Recommended temperatures for storage are from 18°C~24°C (65°F~75°F) and relative air humidity from 46% to 60%.
- 3) It is advisable to stay rolls in horizontal condition. If the rolls are stored in a vertical, a negative influence on the film's characteristics is expected.

IMPORTANT NOTICE

Durability

The durability of REFLOMAX GLODIAN™ Flexible HIP series and finished signs using them will depend upon substrate selection and preparation, compliance with recommended application procedures, geographic area, exposure conditions, and maintenance. Maximum durability of REFLOMAX GLODIAN™ Flexible HIP series can be expected in applications subject to vertical exposure on stationary objects when processed and applied to properly prepared aluminum according to Reflomap's recommendations. Periodic sign inspection and regular sign replacement are strongly recommended in order for sign owners to establish their own effective service life expectation beyond any durability warranty, if provided.

Substrate

The user must determine the suitability of any nonmetallic sign backing for its intended use. Applications to unprimed, excessively rough or non-weather resistant surfaces can shorten the performance of such applications.

Exposure

Exposure to severe or unusual conditions can shorten the performance of such applications. Signs in mountainous areas that are covered by snow for prolonged periods may also have reduced durability. Atmospheric conditions in certain geographic areas may result in reduced durability.

Splice

There could be one splice per roll and additional meter will be provided in case of roll with splice.

Warranty

No warranty is given for purposes other than those listed in the Technical Datasheet or which are not processed according to REFLOMAX's processing and handling instructions. The durability of the signs will depend on a variety of factors, including but not limited to substrate selection and preparation, compliance with recommended application guidelines, geographic area, exposure conditions and maintenance of the product and finished sign. Sign failures caused by the substrate or improper surface preparations are not the responsibility of Reflomap. Please refer to the full warranty document available at www.reflomap.com for detailed information.

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