



FLEET MARKING GRADE REFLECTIVE SHEETING WITH AIR EGRESS TECHNICAL BULLETIN

1. INTRODUCTION

Nikkalite™ Brand Fleet Marking Grade Reflective Sheeting with Air Egress (R8512GI) was developed for vehicle graphics and high-resolution digital printing. R8512GI has a permanent adhesive, air egress technology. (bubble free), superior resolution with digital printing, and outstanding conformability over uneven surfaces. R8512GI is easy to handle and has a pressure sensitive adhesive with a removable liner.

2. AVAILABLE STANDARD WIDTH, LENGTH AND COLOR

Width: 24", 30", 36", 48"

Length: 50 Yards

Color: White

3. PHOTOMETRIC PERFORMANCE

Typical coefficient of retroreflection R8512GI sheeting, when measured with the methods specified in ASTM D4956, expressed in candlepower per lux per square meter.

(cd/lux/m²)

Product Number	Color	Observation Angle/Entrance Angle 0.2°/-4°
R8512GI	White	70

4. TECHNICAL DATA

Properties	Test Method	Results and others
Average Thickness (without liner)	Micrometer	160µm (5-6 mil)
Average Gloss	Gloss-meter	80
Tensile Strength	Tensile tester at 30cm (12")/min.	25.5 N/25mm width
Elongation at Break	Tensile tester at 30cm (12")/min.	110%
Min./Max. Application Temperature	Flat, smooth and uneven surfaces	59°F (15°C) – 77 °F (25°C)

R8512GI sheeting applied onto an aluminum plate with a 2kg hand roller. (Results may vary depending on substrates used).

5. DURABILITY

R8512GI when applied per the manufacturer's instructions, HAS AN EXPECTED PERFORMANCE LIFE OF 7 YEARS when exposed vertically. The reflective sheeting shall be considered as performing satisfactorily if the sheeting has not deteriorated due to natural causes. R8512GI is compatible with most OEM Latex, Ecosol, and UV inks. Profiles are available on our website. All inks and laminates must be tested by the end user to ensure compatibility.



6. SUBSTRATE TREATMENT

R8512GI may be applied on to flat or uneven surfaces. Surface should be cleaned prior to application. A neutral detergent solution or mild solvents should be used to remove oil, stains, and other similar types of petroleum-based contaminants.

7. APPLICATION PROCESS

For best results, sheeting should be applied inside a temperature-controlled facility. A minimum 24-hour curing period is needed to maximize adhesive strength. End-user should conduct their own adhesive tests on the desired surface as enamels vary from vehicle to vehicle. A squeegee or laminator is needed for consistent pressure. A heat gun can be used to give the sheeting greater flexibility. R8512GI should not be stretched, as it may result in color change, physical damage, and performance degradation.

8. CLEANING

A solution of a mild detergent in clean warm water is recommended for cleaning the sheeting surface. The detergent and cloth must be non-abrasive and free of strong aromatic solvents or alcohol. Rinse the area thoroughly after washing with a low-pressure flow of water and allow to dry naturally or use a lint free cloth. Caution must be used with automatic car washes as strong solvents and hard brushes may be used.

9. STORAGE AND SHELF LIFE

R8512GI should be stored between 59°F and 77°F (15°C and 25°C) with a relative humidity of 30% to 60%, and out of direct sunlight. Rolls should be stored horizontally above the floor with proper suspensions. Rolls should not rest on a hard surface as this may damage the sheeting. Do not stand full or partial rolls vertically. R8512GI has a 12-month shelf life.

10. RELIABILITY

All recommendations and technical information contained herein are based on experience and tests, which the manufacturer believes to be reliable. The user is cautioned to undertake their own evaluation to determine the suitability of a particular product for the intended application.

11. WARRANTY

Nikkalite™ products are warranted to be free from defects in materials and workmanship at the time of their sale. Performance durability is warranted for sheeting exposure less than 45°. Exposure angles exceeding 45° will reduce the durability proportionally.

12. CAUTION

Read through First Aid, Health Hazard and Precautionary statements mentioned in the Materials Safety Data Sheets (MSDS).