

Calibrated Comparison Panel Kit – Rail Cars

ISSUED: OCT 2020

Overview

Avery Dennison® Calibrated Comparison Panel Kit for Rail Cars is intended to assist rail car owners and repair shops in meeting their maintenance obligations for maintaining minimum reflectivity levels shown in the FRA-224 regulation. The Calibrated Comparison Panel Kit contains the required panel individually calibrated and labeled to enable maintenance workers to conduct visual reflector assessment as being implemented under FRA-224.

Kit Contents

Description	Quantity
4" x 4" calibrated yellow panel in accordance with AAR standards	1
Protective Pelican™ Case	1
Microfiber Cloth	1
Cleaning/Maintenance	1

Features

- Calibrated panel engineered and certified with retroreflectivity of 150-170 cd/lux/m², measured in accordance with ASTM E810.
- Kit enables use of calibrated panels for visual assessment in compliance with FRA-224
- Magnetic backing
- Highly durable Pelican case™

Performance

International	AAR Standard S-916
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Avery Dennison recommends the user obtain the current requirements from their local governing agency to ensure product conformance.

Applications

Visual assessment and retroreflectivity comparison of reflectors on rail cars

Table A - Retroreflectivity

Minimum and maximum coefficients of Retroreflection (R _A) cd/ft ² OR cd/lx/m ²			
Observation Angle	Entrance Angle		Yellow
0.2°	-4°	Min	150
		Max	170
0.5°	30°	Min	35

Caring for the Kit:

Avery Dennison Comparator Panel should be stored in the protective case as it was delivered and kept in a cool, dry area preferably at 65° - 75°F and 45%-55% RH. If the Comparator Panel needs to be cleaned, use only the micro fiber cloth included in the protective case. If needed, fully saturate the surface with water, use the micro cloth to wipe the surface and allow to air dry. If needed, a cleaning solution with a pH range of 4 to 10 can be used. The cleaning solution should be nonabrasive and free of strong solvents. Do not use anything other than the included micro cloth to clean the panel.

Warranty

WARRANTY

This Warranty applies to the Product listed in this Data Sheet. All statements, technical information (including physical and chemical characteristics) and recommendations about Avery Dennison products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold subject to the Purchaser's assent and agreement that Purchaser is responsible for, and has independently determined, the suitability of such products for its purposes or its customer's purposes. Avery Dennison reflective products are warranted to be free from defects in material and workmanship for one (1) year from the date of manufacture, unless stated otherwise in the applicable product data sheet. Such time periods are subject in either case to the proper storing, caring, and application of said product, and the failure to properly store or apply the product, including without limitation the failure to follow any applicable Instructional Bulletin, negates any warranty. It is expressly agreed and understood that Avery Dennison's sole obligation and Purchaser's exclusive remedy under this warranty, under any other warranty, express or implied, or otherwise, shall be limited exclusively to: (a) repair or replacement of defective product without charge at Avery Dennison's plant or at the location of the product (at Avery Dennison's election), or (b) in the event repair or replacement are not commercially practical, a credit amount up to the price of the product taking into account the defect in the product in Avery Dennison's sole discretion

CONDITIONS

The foregoing warranty shall be contingent on Avery Dennison's satisfactory conclusion that the following conditions are met: The product failure must have resulted solely from a manufacturing defect or deterioration of the sheeting due to normal wear and use conditions and not from subsequent processing, handling, manipulation or application of the product. Without limiting the generality of the foregoing, there is no warranty or liability for the failure of the sheeting or resulting license plate due to improper application, improper storage, handling, installation, maintenance, failure of the substrate, vandalism, accidents, fire, exposure to high levels of industrial pollutants, fuel spills, engine exhaust, or mischief. Slight color fading, cracking, chalking, blistering, peeling or slight reduction in gloss or reflectivity will not materially detract from appearance and does not constitute a claim under this warranty for replacement product. Avery Dennison has published instructional bulletins pertaining to the storage, handling, cleaning and maintenance of sheeting, approved sheeting substrates, and sheeting application procedures (collectively, the "Procedures"). The sheeting must have been processed and applied to blank, clean (no contaminants on the surface) approved license plate substrates in accordance with the Procedures, as such may be amended from time to time without notice.

ADDITIONAL LIMITATIONS

Unintended Use: This warranty only applies to Product that is used by professional converters and installers for the defined end uses and in the combinations described in the applicable Avery Dennison Product Data Sheets and Instructional Bulletins. For any other use, the user is responsible for determining the suitability of the Product, and for any and all risk or liability associated with that use or application, and the user agrees to indemnify, defend and hold harmless Avery Dennison for any claims, losses, damages, judgments, expenses and/or expenses, including attorneys fees, resulting from such use or application. This warranty is expressly conditioned on the Product being processed by professional converters or installers in accordance with the Avery Dennison recommended written processing instructions, and being applied to properly prepared surfaces and cleaned and maintained in accordance with recommended Avery Dennison procedures. It is the converters, installers or other users responsibility to perform incoming raw material quality inspections, to assure proper surface preparation and that approved application procedures are followed, to retain converted samples, and to immediately cease using and notify Avery Dennison and/or its authorized agent or distributor of any Product, Materials and/or finished Product discovered to be (or reasonably capable of being discovered to be) defective.

Misuse and Force Majeure: Avery Dennison has no obligations or liability under this warranty with respect to Product that has been altered, modified, damaged, misused, abused, subject to accident, neglected or otherwise mishandled or improperly processed or installed. Product is not warranted against premature failure caused by chemical, environmental or mechanical means such as, but not limited to, vandalism, cleaning solutions, paints, solvents, moisture, temperature, mechanical washing equipment, engine fuel spills, engine exhaust, steam, organic solvents or other spilled chemicals pollutants, including industrial and volcanic ash. Damage from fire, structural failure, lightning, accidents, and other force majeure events are not covered by this warranty.

Third Party Product: Avery Dennison assumes no responsibility for any injury, loss or damage arising out of the use of a product that is not of our manufacture. Where installer or converter uses or reference is made to a commercially available product, made by another manufacturer, it shall be the responsibility of the user, installer or converter to ascertain the precautionary measures for its use outlined by the manufacturer.

The remedies provided under this warranty are exclusive. In no event shall Avery Dennison be responsible for any direct, indirect, incidental or consequential damages or specific relief whether foreseeable or not, caused by defects in such Product, whether such damage occurs or is discovered before or after replacement or credit, and whether or not such damage is caused by Avery Dennison's negligence. In no event shall Avery Dennison's liability hereunder exceed the remedies specifically set forth in this warranty. Avery Dennison's liability shall be limited, at Avery Dennison's option, to the purchase price, replacement of the defective Product and in some cases when authorized by Avery Dennison the repair and replacement of the defective Product. **THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHERS. ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING CONDITIONS SHALL BE VALID UNLESS MADE IN WRITING AND MANUALLY SIGNED BY AN OFFICER OF AVERY DENNISON.**

DEFINITIONS

Durability: means that the Product in a finished graphic, panel or sign situated outdoors, subject to the limitations herein and Avery Dennison Product Data Sheets and Instructional Bulletins, and applied to recommended surfaces, will not deteriorate excessively such that the finished sign, panel or graphic is ineffective for its identification when viewed under normal conditions from the intended viewing distance.

INDEPENDENT TESTING REQUIRED All statements, technical information and recommendations about Avery Dennison products are based upon tests and information believed to be reliable but do not constitute a guarantee or warranty of any kind. All Avery Dennison products are sold with the understanding that Purchaser has independently determined the suitability of such products for its intended and other purposes.

