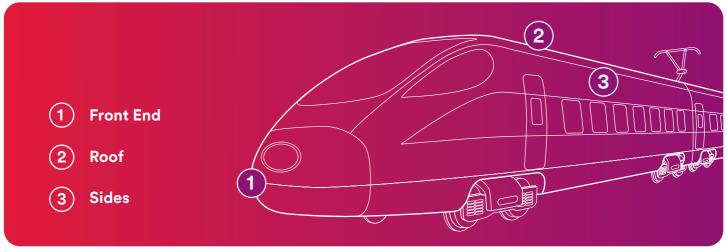


3M Application Profile: Long Term Surface Protection for Trains





3M™ Protective Films can provide an easy way to protect critical exterior surfaces.

Application Description:

Transparent polyurethane protective film is used on a variety of surfaces such as steel, carbon fiber, aluminum alloys and painted materials. The film protects the surface from wear and exposure to UV rays, dirt and moisture. This helps to maintain the aesthetics of the surface and assists in preventing corrosion.

Application Benefit:

 Helps maintain surface integrity to minimize exterior maintenance

Key Application Requirements:

 Film should create minimal change in surface appearance, even over extended periods of time and be removable at end-of-life



High speed trains have an increased chance of surface wear or rock impact damage. $3M^{\text{\tiny M}}$ Protective Films can help avoid much of this damage.

Engineered Industrial Tapes

For Passenger Rail

Tape Benefits:

• Engineered for durability:

Resists damage from abrasion—commonly caused by caused by rocks, tree branches and other debris—chemicals, tears and punctures. Maintains a smooth, long-lasting surface on train exteriors including high-visibility areas

Excellent backing transparency:

Allows for surface protection with minimal distortion of surface design and/or printed information beneath film

• Easy-release paper liner:

Enables die cutting for simple, streamlined application during or after manufacture

Fully compatible with most paints:

Seamlessly applies over painted surfaces or can easily be painted

- UV resistant: Withstands outdoor conditions
- Easy to apply/Immediate use: Simply apply manually with no need to wait for curing vs. liquid coatings

Flat and Curved Surfaces

3M™ Industrial Protective Film 7070UV

3M™ Industrial Protective Film 7070MUV

3M™ Industrial Protective Film 7071UV

Thermoformable for Complex Surfaces

3M™ Polyurethane Protective Tape 8673

3M[™] Polyurethane Protective Tape 8674



Industrial Adhesives and Tapes Division 3M Center St. Paul, MN 55144-1000 Phone 800-362-3550

3M is a trademarks of 3M Company. © 3M 2024. All rights reserved. Please recycle. Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product in accordance with all applicable instructions and with appropriate safety equipment, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement or repair of the 3M product or refund of the purchase price. Warranty claims must be made within one (1) year from the date of 3M's shipment.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by applicable law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and other limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, death, or property damage. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.[1].