

PRODUCT DATA SHEET

Avery Dennison® Paint Protection Film SPF X2 DIR

Issued: 08/2024

Introduction

Avery Dennison Paint Protection Film SPF-X2 DIR is a transparent thermoplastic polyurethane film, with a clear gloss finish, specially designed to protect the finish of a vehicle. It can help prevent the degradation of the original vehicle paint from small stone chips, some road debris, mild insect stains, small to medium scratches, mild chemical stains and general weathering. The top-coat of SPF-X2 DIR has "self-healing" capabilities for smaller scratches on the film that disappear when the film is exposed to heat.

Conversion

SPF-X2 DIR is designed for vehicle paint and painted surface protection purposes and is easy to size by manual cutting during application or digital cutting plotters. It is also possible to apply SPF-X2 DIR on top of pre-existing and applied Avery Dennison Supreme Wrapping Film should be applied using the wet application method. For more information please refer to TB. 6.6 Application Instructions for Avery Dennison SPF DIR Series.

Note: Always remove the protective PET top sheet immediately after cutting material from the roll or before converting using a plotter or flatbed cutter. Always store unused material on the roll and tightly wound and secure.

Recommendations

- » Protection of the external surfaces of the vehicle, such as bumper, side mirrors, hood & wheel arches.
- » Protection of painted internal metal surfaces, such as luggage racks or chairs in busses or trains.
- » Protection of painted metal surfaces in high traffic areas, such as reception desks, door impact areas, wall panels and more.

Features

- » SPF-X2 DIR topcoat provides stain resistance and minimizes yellowing.
- » Heat activated self-healing top coat provides good scratch resistance and recovery
- » Protection of painted surfaces from small stone chips, some road debris, small insect stains and general weathering
- » Improves visual properties - enhancing the look of the vehicle; optical clarity & high gloss finish
- » Up to 10 years protection- maintaining the quality of vehicle finish
- » Conformable thermoplastic polyurethane (TPU) film



Face Film

135µm gloss clear top-coated thermoplastic polyurethane (TPU) protected with PET sheet



Adhesive

Permanent, acrylic based



Backing

PET liner



Durability

Zone 1 vertical, 7 years



Shelf Life

1 year Stored at 22°C 50-55% RH

Physical Characteristics

	Test method ¹	Results
Product		
Caliper, facefilm (micron)	ISO 534	135
Caliper, facefilm + adhesive (micron)	ISO 534	165
Gloss (GU)	ISO 2813, 6900°	
Dimensional stability	FINAT FTM 14	<0.1%
Shelf life (years)	Stored at 22° C/50-55 % RH	1
Adhesive		
Tensile strength (N/mm ²)	ISO 527	18
Elongation (%)	ISO 527	250
Adhesion, initial (N/m)	FINAT FTM-1, stainless steel	590
Adhesion, after 24 hours (N/m)	FINAT FTM-1, stainless steel	785
Temperature range		
Application temperature (Minimum: °C)		15
Service temperature (°C to +°C)		-40 to 100
Chemical properties²		
	Visual inspection after exposure to following test fluids	
Gasoline	30min	No significant change
Car wash solution	30min	No significant change
Diesel	30min	No significant change
Hepatne	30min	No significant change
10% sulfuric acid	30min	No significant change
Motor oil	30min	No significant change
Solvent resistance	30min	No effect on exposure to Isopropyl Alcohol
Other tests		
Heat aging	500h@90°C	No significant change
Water Immersion	400h @40°C	No significant change
Warranty for Zone 3**	7 years	

** Please find more information on the conditions for warranty [here](#)

Important

Information on physical and chemical characteristics and values in this document are based upon tests we believe to be reliable and do not constitute a warranty. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use.

All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of this document, the English version shall be prevailing and leading.

1) Test methods: More information about our test methods can be found on our website.

2) Prolonged immersion in gasoline and similar fluids is not recommended.

Avery Dennison warrants that its Products meet its specifications. Avery Dennison gives no other express or implied guarantees or warranties with respect to the Products, including, but not limited to, any implied warranties of merchantability, fitness for any particular use and/or non infringement. All Avery Dennison products are sold with the understanding that the purchaser has independently determined the suitability of such products for its purposes. The period of warranty is one (1) year from the date of shipment unless expressly provided otherwise in the product data sheet. All Avery Dennison's products are sold subject to Avery Dennison's general terms and conditions of sale, see <http://terms.europe.averydennison.com>.

Avery Dennison's aggregate liability to Purchaser, whether for negligence, breach of contract, misrepresentation or otherwise, shall in no circumstances exceed the price of the defective, non-conforming, damaged or undelivered Products which give rise to such liability as determined by net price invoices to Purchaser in respect of any occurrence or series of occurrences. In no circumstances shall Avery Dennison be liable to Purchaser for any indirect, incidental or consequential loss, damage or injury, including without limitation, loss of anticipated profits, goodwill, reputation, or losses or expenses resulting from third party claims.

© 2024 Avery Dennison Corporation. All rights reserved. Avery Dennison and all other Avery Dennison brands, this publication, its content, product names and codes are owned by Avery Dennison Corporation. All other brands and product names are trademarks of their respective owners. This publication must not be used, copied or reproduced in whole or in part for any purposes other than marketing by Avery Dennison.