



1. Product Name

Miracle/Kingco Brand HVAC Adhesives

- PF-101, PF-102 Duct Liner Adhesive
- PF-2001 Aerosol Canister Duct Liner Adhesive
- PF-2001B Duct Liner Spray Adhesive
- PF-701, PF-702 All Purpose Duct Liner Adhesive
- LA-76AF Lagging Adhesive
- 1330 General Purpose Spray Adhesive
- PF-96, PF-97 Duct Liner Spray Adhesive
- 15-114 Duct Liner Aerosol Adhesive
- Ultratack

2. Manufacturer

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3. Product Description

BASIC USE

ITW TACC's Miracle/Kingco Brand line of adhesives is specifically engineered for the construction and HVAC trades. Each product applies easily and delivers superior flexibility without sacrificing bond strength and durability.

TYPES

PF-101, PF-102 Duct Liner Adhesive

A sprayable, water based, nonflammable, fast drying adhesive, PF-101, PF-102 is specifically formulated for bonding low density fiberglass insulation to painted or unpainted metal surfaces, galvanized substrates, etc. It may also be used as an edge treatment for fiberglass insulation. PF-101, PF-102 offers good resistance to heat, moisture, oil and grease. It offers excellent resistance to aging. These products will also help builders earn credit points toward LEED certification.

PF-2001 Aerosol Canister Duct Liner Adhesive

This nonflammable adhesive comes in a convenient spray canister and is specifically formulated for quick tack and strong bond when bonding fiberglass insulation to sheet

metal. This product's lacing type spray pattern lays adhesive on the surface of porous substrates, such as fiberglass, so less adhesive is needed to form a superior bond to sheet metal. An industrial grade adhesive, PF-2001 also effectively bonds paper, cardboard, cork, cloth urethane foam, foil, etc., to like surfaces or to metal, wood, glass or other surfaces. It provides excellent resistance to moisture and aging.

PF-2001B Duct Liner Spray Adhesive

This nonflammable, solvent based adhesive is designed to bond low density fiberglass insulation to the interior and exterior of sheet metal air conditioning ducts. It is also an excellent adhesive for bonding urethane foam, felt and cork to metal, wood and plastic surfaces. PF-2001B offers fast tacking and excellent sprayability without cob webbing or clogging of equipment. It also provides good resistance to oxidation, moisture, heat and UV exposure.

PF-701, PF-702 All Purpose Duct Liner Adhesive

A water based, nonflammable, solvent-free duct liner adhesive, PF-701, PF-702 is specifically formulated for bonding low density fiberglass to painted or unpainted ductwork, such as in automated duct manufacturing equipment (coil lines or roto-bonders). The product offers good resistance to heat, moisture, oil and grease, and it provides exceptional resistance to aging. These products will also help builders earn credit points toward LEED certification.

LA-76 Lagging Adhesive

This water based adhesive and coating is suitable for bonding and coating canvas, cloth or other lagging jackets over insulation. LA-76AF is nonflammable in a wet state and is fire retardant when dry. It offers good resistance to water, oil, grease, etc., while offering excellent resistance to aging. LA-76AF is ideal for both interior and exterior applications. This product will also help builders earn credit points toward LEED certification.

1330 General Purpose Spray Adhesive

The 1330 general purpose spray adhesive is an aerosol package especially formulated to provide a quick tack and a strong bond when bonding fiberglass onto sheet metal. It can also be used to bond foam to wood, metal or cloth. Additional advantages include:

- Aggressive grab/tack forms high strength bond
- Reduces application time
- Self-contained portable spray system

- No cleanup required
- No CFCs or ozone depleting compounds

PF-96, PF-97 Duct Liner Spray Adhesive

This adhesive is designed for application by spray equipment when bonding low density fiberglass insulation to the interior and exterior of all types of painted or unpainted metal ductwork. PF-96, PF-97 offers fast tacking and excellent spray performance without cob webbing. It provides excellent resistance to moisture and aging.

15-114 Duct Liner Aerosol Adhesive

This spray adhesive is an aerosol package specifically formulated for a quick tack and strong bond when bonding fiberglass onto sheet metal. It can also be used to bond foam to wood, metal or cloth. This product offers good resistance to oxidation and moisture.

Ultratack

This fast-drying, sprayable, water based adhesive is specifically formulated for bonding low density insulation to metal surfaces, galvanized substrates, etc. This product offers good resistance to heat, moisture and oxidation and excellent resistance to aging. These products will also help builders earn credit points toward LEED certification.

PACKAGING

See Table 1.

YIELD

- PF-101, PF-102 - 450 - 600 ft²/gal (11.3 - 15 m²/L)
- PF-2001B - 450 - 600 ft²/gal (11.3 - 15 m²/L)
- PF-701, PF-702 - 600 ft²/gal (15 m²/L)
- LA-76AF - Up to 200 ft²/gal (5 m²/L), depending on texture of insulation
- PF-96, PF-97 - 500 ft²/gal (12.5 m²/L)
- Ultratack - 1900 ft²/gal (48 m²/L)

LIMITATIONS

- PF-101, PF-102 - For best results, keep product from freezing and store between 60 and 90 degrees F (16 and 32 degrees C). The shelf life is a minimum of 6 months in a tightly sealed container
- PF-2001 - Do not store in direct sunlight or in temperatures over 120 degrees F (49 degrees C). Product can be stored for up to one year in an unopened container
- PF-2001B - For best results, keep product from freezing and store between 60 and 90 degrees F (16 and 32 degrees C). Product can be stored for up to one year in an unopened container
- PF-701, PF-702 - For best results, keep product from freezing and store between 60



TABLE 1 PACKAGING INFORMATION

	Size	Color	Case/Pack	Item Number
PF-101 Duct Liner Adhesive	1 gal (3.8 L)	White	4	062
	5 gal (19 L) pail, Reiki lid	White	1	063
	55 gal (208 L) drum	White	1	064
PF-102 Duct Liner Adhesive	1 gal (3.8 L)	Black	4	065
	5 gal (19 L) pail, Reiki lid	Black	1	G80
	55 gal (208 L) drum	Black	1	067
PF-2001 Aerosol Canister Duct Liner Adhesive	12 lb (5.4 kg) aerosol canister	Green	1	9712G
	40 lb (18 kg) aerosol canister	Green	1	9740G
	187 lb (85 kg) aerosol canister	Green	1	97187G
	375 lb (170 kg) aerosol canister	Green	1	97375G
PF-2001B Duct Liner Spray Adhesive	5 gal (19 L) pail	Green	1	PF2001B-05
	55 gal (208 L) drum	Green	1	PF2001B-55
PF-701 All Purpose Duct Liner Adhesive	5 gal (19 L) pail, Reiki lid	White	1	M701-05W
	55 gal (208 L) drum	White	1	M701-55W
PF-702 All Purpose Duct Liner Adhesive	5 gal (19 L) pail, Reiki lid	Black	1	M702-05B
	55 gal (208 L) drum	Black	1	M702-55B
LA-76AF Lagging Adhesive	1 gal (3.8 L)	White	4	025
	2 gal (7.6 L)	White	1	628
	5 gal (19 L) pail, Reiki lid	White	1	026
1330 General Purpose Spray Adhesive	17 oz aerosol can	Clear	12	1330
PF-96 Duct Liner Spray Adhesive	1 gal (3.8 L)	Red	4	053
	5 gal (19 L) pail, flat lid	Red	1	054
	5 gal (19 L) pail, Reiki lid	Red	1	G31
	55 gal (208 L) drum	Red	1	055
PF-97 Duct Liner Spray Adhesive	5 gal (19 L) pail, Reiki lid	Black	1	G32
	55 gal (208 L) drum	Black	1	061
15-114 Duct Liner Aerosol Adhesive	14 oz aerosol can	Amber	12	15-114-9930
Ultratack	55 gal (208 L) drum	Off-white	1	595

and 90 degrees F (16 and 32 degrees C). The shelf life is a minimum of 6 months in a tightly sealed container

- LA-76 Keep product from freezing and store between 40 and 110 degrees F (4 and 43 degrees C). Product can be stored for up to one year in an unopened container
- 1330 - It should be stored in a climate controlled environment between -20 and 160 degrees F (-29 and 71 degrees C). The open/working time is greater than an hour
- PF-96, PF-97 - For best results, store product between 60 and 90 degrees F (16 and 32 degrees C). Product can be stored for up to one year in an unopened container
- 15-114 - For best results, do not store product in direct sunlight or allow it to reach temperatures over 120 degrees F (49 degrees C). Product can be stored for up to one year in an unopened container

- Ultratack - Keep from freezing and store between 60 and 90 degrees F (16 and 32 degrees C). Product can be stored for up to 6 months in a tightly closed container

4. Technical Data

APPLICABLE STANDARDS

ASTM International

- ASTM C916 Standard Specification for Adhesives for Duct Thermal Insulation
- ASTM D1310 Standard Test Method for Flash Point and Fire Point of Liquids by Tag Open-Cup Apparatus
- ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials

National Fire Protection Association (NFPA)

- NFPA 90A Installation of Air Conditioning and Ventilating Systems
- NFPA 90B Installation of Warm Air Heating

and Air Conditioning Systems

California Air Resources Board (CARB)

South Coast Air Quality Management District (SCAQMD)

Underwriters Laboratories, Inc. (UL)

APPROVALS

- LA-76, PF-101, PF-102, PF-701, PF-702 and PF-96, PF-97 meet NFPA 90A and 90B
- LA-76, PF-701, PF-702 and Ultratack are City of Los Angeles Approved - RR 7988
- LA-76, PF-101, PF-102, PF-701, PF-702 comply with SCAQMD, Rule 1168
- LA-76, PF-101, PF-102, PF-701, PF-702 and Ultratack meet requirements for LEED IEQ credit 4.1: Low Emitting Materials



PHYSICAL/CHEMICAL PROPERTIES

PF-101, PF-102

- Odor - Bland when wet; odorless when dry
- Base - Synthetic, resin emulsion
- Volatile material - Water
- Density - 9.5 ± 0.3 lb/gal
- Solids content - 54% ± 3%
- Viscosity - 4000 - 5000 CPS
- Flash point (ASTM D1310) - No flash point to boiling
- Complies with ASTM C916, Type I

PF-2001

- Odor - Mild when wet; odorless when dry
- Base - Synthetic, rubber and resin
- Volatile material - Methylene chloride
- Solids content - 28% ± 2%

PF-2001B

- Odor - Mild when wet; odorless when dry
- Base - Methylene chloride
- Volatile material - Aliphatic hydrocarbons
- Density - 10.2 ± 0.5 lb/gal
- Solids content - 13.5% ± 2%
- Complies with ASTM C916, Type IV

PF-701, PF-702

- Odor - Mild when wet; odorless when dry
- Base - Synthetic, resin emulsion
- Volatile material - Water
- Density - 9.9 ± 0.2 lb/gal
- Solids content - 56% ± 2%
- Viscosity - 2000 ± 500 CPS
- Flash point (ASTM D1310) - No flash point to boiling
- Complies with ASTM C916, Type I

LA-76

- Odor - Bland when wet; odorless when dry
- Base - Synthetic, elastomeric emulsion
- Volatile material - Water
- Density - 10.7 ± 0.2 lb/gal
- Solids content - 50% ± 2%
- Viscosity - 90,000 - 110,000 CPS
- Water vapor performance (ASTM E96, Procedure B) - 0.8 perm (19 mil DF)
- Flash point (ASTM D1310) - No flash point to boiling

1330

- Base - Synthetic polymer
- Volatile material - Methylene chloride
- Propellant - Hydrocarbon blend
- Spray pattern - Variable web

PF-96, PF-97

- Odor - Mild when wet; odorless when dry
- Base - Synthetic elastomer
- Volatile material - Aliphatic hydrocarbon
- Density - 6.3 ± 0.5 lb/gal

- Solids content - 33% ± 2%
- Viscosity - 1800 ± 3000 CPS
- Flash point (ASTM D1310) - Less than -20 degrees F (-29 degrees C)
- Complies with ASTM C916, Type IV

15-114

- Odor - Sweet, mild when wet; odorless when dry
- Base - Synthetic rubber and resin
- Volatile material - Keystone and aliphatic hydrocarbons
- Solids content - 21.5% ± 2.5%
- Complies with CARB consumer products regulation relating to aerosol additives

Ultratrack

- Odor - Faint vanilla
- Base - Synthetic and natural elastomers and tackifier
- Volatile material - Water
- Density - 8.67 ± 0.2 lb/gal
- Solids content - 53.2% ± 2%
- VOC content - < 0.1 grams/L
- Viscosity - 1800 - 3000 CPS
- Bonding range - Immediate to 10 minutes, depending on temperature and humidity
- Flash point (ASTM D1310) - 212 degrees F (100 degrees C)
- Complies with ASTM C916, Type II

FIRE PERFORMANCE

- UL listed

PF-101, PF-102

- Classified - Adhesive, UL designation - R-6891
- Flamespread 10, smoke developed 0

PF-701, PF-702

- Classified - Adhesive, UL designation - R5058
- Flamespread 0, smoke developed 0

LA-76

- Classified - Adhesive, UL designation - R-6891
- Flamespread 5, smoke developed 5

PF-96, PF-97

- Classified - Adhesive, UL designation - R-6891
- Flamespread 5, smoke developed 0

Ultratrack

- Classified - Adhesive, UL designation - R-6891
- Flamespread 5, smoke developed 5

5. Installation

PREPARATORY WORK

Handle and store product according to ITW TACC recommendations.

Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials protected

from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

METHODS

- PF-101, PF-102 - Apply by brush, roller or with standard spray equipment. Surface should be free of dirt, oil and grease. Do not thin or freeze. Apply at temperatures between 40 and 100 degrees F (4 and 38 degrees C). The adhesive will bond within 10 minutes, depending on temperature. The service temperature range is 0 - 200 degrees F (-18 - 93 degrees C). Clean with warm, soapy water when wet and with mineral spirits when dry
- PF-2001 - Spray a light mist coat onto surface to be bonded. Use a double coat on fabrics. Apply at temperatures between 50 and 110 degrees F (10 and 43 degrees C). The adhesive will bond within 5 minutes, depending on the substrate. The service temperature range is -20 - 200 degrees F (-29 - 93 degrees C). Clean with mineral spirits
- PF-2001B - Apply by brush, roller or with standard spray equipment when temperature is between 30 and 110 degrees F (-1 and 43 degrees C). Bonding will occur within 5 minutes. The service temperature range is -20 - 200 degrees F (-29 - 93 degrees C). Clean with mineral spirits
- PF-701, PF-702 - Apply by brush, roller or with standard spray equipment when temperature is between 40 and 100 degrees F (4 and 38 degrees C). Surface should be free of dirt, oil and grease. Do not thin or freeze. Bonding will occur within 10 minutes, depending on temperature. The service temperature range is 0 - 200 degrees F (-18 - 93 degrees C). Clean with warm, soapy water when wet and with mineral spirits when dry
- LA-76 - Brush onto a lagging cloth to hold and follow with a double coat for finish. Bonding may take up to 40 minutes. For best results, apply at temperatures between 35 and 120 degrees F (2 and 49 degrees C). The service temperature range is 0 - 200 degrees F (-18 - 93 degrees C). Clean with warm, soapy water when wet and with mineral spirits when dry
- 1330 - Shake before use. The product will dry within 2 minutes
- PF-96, PF-97 - Spray, brush or roll coat to the metal surface when temperature is



between 30 and 110 degrees F (-1 and 43 degrees C). Embed fiberglass duct liner into wet adhesive. Bonding will occur within 5 minutes. Clean with mineral spirits

- 15-114 - Depress nozzle and spray a light mist coat onto surface to be bonded. Use a double coat on fabrics. Apply at temperatures between 30 and 110 degrees F (-1 and 43 degrees C). Bonding will occur within 5 minutes, depending on the substrate. After spraying, invert can and depress nozzle to clear valve for future use. The service temperature range is -20 - 200 degrees F (-29 - 93 degrees C). Clean with mineral spirits
- Spray, brush or roll coat onto either the metal surface or the insulation and press firmly into place. Drum pumps and pressure pots can be used with standard spray equipment. Apply at temperatures between 0 - 200 degrees F (-18 - 93 degrees C). Clean with warm, soapy water when wet and with mineral spirits when dry

PRECAUTIONS

- PF-2001 - This is a flammable propellant. Contents are under pressure
- PF-2001B - Avoid prolonged breathing of vapors and repeated skin contact. Container must remain closed when not in use
- PF-96, PF-97 - Extremely flammable. Keep away from sparks and open flame. Avoid prolonged breathing of vapors and repeated skin contact. Use only in well-ventilated areas
- 15-114 - Extremely flammable. Contents under pressure. Do not puncture or incinerate. Keep away from small children

BUILDING CODES

Current data on building code requirements and product compliance may be obtained from ITW TACC technical support specialists. Installation must comply with the requirements of all applicable local, state and national code jurisdictions.

6. Availability & Cost

AVAILABILITY

These products are available throughout the United States.

COST

Budget installed cost information may be obtained from the manufacturer.

7. Warranty

Warranty provisions vary by product. Contact the manufacturer for complete warranty details.

8. Maintenance

No maintenance required.

9. Technical Services

ITW TACC is committed to providing complete support for all its products and for all relevant applications. Customer service and technical support teams are ready to answer questions and to help construction professionals get the most out of ITW TACC adhesive products.

10. Filing Systems

- Reed First Source
- MANU-SPEC®
- Additional product information is available from the manufacturer upon request.