J-Spray 50

Spray Adhesive

Technical Data Sheet

Product Description

J-Spray 50 spray adhesives are industrial grade, versatile bulk spray adhesives formulated for specific substrates and market needs (soft foams - polystyrene foams). The adhesive is packaged in convenient, portable, no maintenance aerosol cylinders.

Key Features

- High solids, high coverage adhesive.
- Fast drying formulas to help speed assembly.
- Good moisture resistance to help protect bonds.
- Temporary or permanent bonds on substrates like fabrics, soft foams, polystyrene foam, heavy papers, wood, metal, glass and most plastics.
- One or two surface bonding capabilities.
- Non-Flammable solvent and propellant adhesive.
- High temperature resistance.

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Base:	Synthetic Elastomer	
Solids Content of Adhesive - propellant removed (by wt.):	40.6%	
Solids Content - aerosol (by wt.):	20.9%	
Color(s):	Clear	
Volatile Organic Compounds (VOC):	546 g/L	
Hazardous Air Pollutants (HAPS) % wt. (calculated):	0%	
MACT Compliant:	Yes	
Flammability:	Solvent	Propellant
	Yes	Yes

J-Spray 50 Spray Adhesive

Available Sizes and Expected Coverage

	Cylinder Size Availability	Cylinder Adhesive Net. Wt. (lbs.)	Sq. Ft. Coverage per Wet lb. of Adh @ 1 gm./sq. ft. (dry wt.):	Sq. Ft. Coverage @ 1 gm./sq. ft. (dry wt.):	Sq. Ft. Coverage @ 2.5 gms./sq. ft. (dry wt.):
J-Spray 50	**Large** - Disposable	27.3	95	2,590	1,036

Handling/ Application Information

Surface Preparation:
For best results, all surfaces to be bonded must be clean, dry and free from dirt, dust, oil, loose paint, wax or grease, etc.

Application Temperature:
For best results, the temperature of the adhesive and the surfaces being bonded should be between 60°-80°F (16°-27°C). Temperatures outside this range may affect bonding range and sprayability.

Equipment Setup:
Attach the larger flare fitting end to the spray applicator and tighten the nut securely. Check to see that the applicator gun trigger stop/adjusting nut is fully locked against the trigger. Attach the other end of the hose, a smaller flare fitting, to the cylinder valve and tighten securely.

Directions For Use:

1.) Slowly open the cylinder valve and inspect the connections for any leaks. Tighten if needed.
2.) Fully open the valve.
3.) Unscrew the trigger stop/adjusting nut away from the trigger 3-4 turns and spray a test pattern. For more adhesive output, continue to screw the nut away from the trigger. For less adhesive output, screw the nut back towards the trigger.
4.) Hold the applicator 3-10 inches away from the surface to be sprayed and apply a uniform coat of adhesive. (The smaller the spray pattern chosen in step 3, the closer the applicator gun will need to be to the surface and vice versa for larger patterns.)
5.) Apply 1-3 even coats of adhesive. (This will depend on the needed coverage for the bonding application.)
6.) Allow adhesive to dry until tacky and then apply sufficient pressure to ensure complete contact.

Note: Test the tackiness by gently touching the adhesive with your knuckle. If the adhesive transfers to your skin, it is too wet. If the adhesive is aggressively tacky and does not transfer to your skin, it is ready to bond. If the adhesive is too dry or only has a very light tack, it is too dry and another coat of adhesive should be applied to at least one of the surfaces.

Dry Time (minutes):	1-4
Open Time (minutes):	1-60

One Surface Bonding: Less demanding applications. Spray the more non-porous surface and bond within Open Time (see Open Times in above table).

Two Surface Bonding: Permanent, more demanding applications. Spray both surfaces and bond within Open Time (see Open Times in above table).

Equipment Shut Down: For storage – screw the trigger stop/adjusting nut all the way to the trigger lock position. Turn the valve on the cylinder to the closed position.

J-Spray 50 Spray Adhesive

Recommended Application Equipment

J-Spray 50 Spray Gun – comes with gold spray tip
J-Spray 50 Hose – available in 12 & 25' lengths
J-Spray 50 Silver Spray Gun Tip – this nozzle is recommended for **J-Spray 50**

Nozzle Suggestions:

	Gold	Silver
Spray Pattern (inches): (see *Note below)	5-12	4-14
Applications:	General Laminating	For use with **J-Spray 50** only

***Note:** Spray pattern widths will vary between products, due to formulation and pressure differences.

Spray Pattern Adjustments: Unscrew the trigger stop/adjusting nut away from the trigger 3-4 turns and spray a test pattern. For more adhesive output and a wider spray pattern, continue to unscrew the nut away from the trigger. For less output and smaller spray pattern, screw the adjusting nut back towards the trigger. Hold the applicator 3-10 inches away from the surfaces to be sprayed and apply a uniform coat of adhesive. (The smaller the spray pattern, the closer the applicator gun will need to be to the surface). The lace sprays form an elliptical pattern and should be sprayed at the patterns widest point.

Typical Adhesive Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Overlap Shear Strength: 1 square inch bonds tested at 2 inches per minute separation rate at 75°F (24°). Results are reported in PSI - pounds per square inch.

Substrate Bonded	
ABS to ABS (2 surface adhesive bond)	64
ABS to ABS (1 surface adhesive bond)	123
Acrylic to Acrylic (2 surface adhesive bond)	152
Aluminum to Aluminum (2 surface adhesive bond)	79
Birch to Birch (2 surface adhesive bond)	193
Birch to Birch (1 surface adhesive bond)	92
Galvanized to Galvanized (2 surface adhesive bond)	78
Galvanized to Galvanized (1 surface adhesive bond)	87
Polyethylene to Polyethylene (2 surface adhesive bond)	35
Polypropylene to Polypropylene (2 surface adhesive bond)	75
FRP (Fiber Reinforced Plastic) to FRP (2 surface adhesive bond)	96

J-Spray 50 Spray Adhesive

Typical Adhesive Performance Characteristics ***(continued)***

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Tensile Strength Failure Temperature: 4 square inch bonds tested with 30 grams hanging in tensile. Temperature is held for 10 minutes and ramped at 10°F increments, until complete failure.

J-Spray 50 Failure Temperature: 190° F

Cold Weather Warning

How Cold Weather Affects Cylinders:

1.) The bulk adhesive in the cylinder will thicken as temperatures get colder.

2.) The propellants used will decrease in pressure and, therefore, effectiveness:

   a. Liquefied hydrocarbon propellants will condense and reduce the effective amount of available pressure on the cylinder. This will adversely affect the spray pattern and, consequently, the overall performance of the adhesive.

   b. Compressed gas propellants will shrink dramatically in cold weather causing the system to have much less available force to push a thicker bulk adhesive out. The effect will be improper, less controlled spray properties with longer dry times needed.

How to Eliminate Cold Weather Problems:

1.) Store the cylinders in a controlled environment with temperatures between 60°-80°F (16°-27°C).

2.) Keep cylinders off of cold concrete floors and away from outside walls.

3.) Use heat belts or blankets, approved for use with flammable adhesives, to control the temperature of the cylinders.

4.) Allow additional time for solvents and propellants to flash off, when temperatures are below 60°F (16°C).

If Cylinders Get Too Cold:

If cylinders arrive cold or have been exposed to temperatures that are causing poor spray properties, move to an area that is heated above 70°F (21°C). The larger the cylinder, the longer it will take for the temperature to equilibrate. Mini (~11 lb.) and Large (~30 lb.) cylinders can be shaken or submerged in hot water to accelerate the warming process. Once the cylinders equilibrate back to at least 60°F (16°C), the products will perform as normal.

Trouble Shooting – Applicator / Hose Clog

Applicator – Hose Clog Checklist

If the system sprays poorly or won't spray at all: The sequence below runs through a complete clog into the cylinder valve. If at any time during the sequence the problem is resolved, stop, clean the needed parts, put the system back together, and you are finished.

1. Make sure the cylinder is not empty.
2. Make sure the cylinder valve is open.
3. Close the applicator trigger stop adjusting nut and clean the nozzle tip. (Does it spray now?)
4. Take off the nozzle and try spraying. (Does it spray now?) Clean the nozzle.
5. Shut off the cylinder valve, CAREFULLY and SLOWLY – loosen the applicator gun/hose connection and look for adhesive to squirt out. If adhesive starts to leak out, allow it to slowly continue to do so until it stops. (This will be a little messy, but you will need to bleed off the pressurized adhesive to clean the applicator gun.) The applicator gun has a clog at the valve, stem or inlet area and needs to be cleaned.
6. If nothing leaks out after fully loosening the applicator gun, CAREFULLY remove applicator gun, realizing that the hose may be clogged but could be full of adhesive and pressure depending on where the clog is. (Secure the open end of the hose into a bucket in case the clog releases and the system flushes.)
7. CAREFULLY and SLOWLY loosen the hose connection at the cylinder valve. Look for adhesive to squirt out. If adhesive starts to leak out, allow it to slowly continue to do so until it stops. (This will be a little messy, but you will need to bleed off the pressurized adhesive in the hose). Clean or replace the hose.
8. With everything now isolated from the cylinder, place a bucket in front of the cylinder valve and slowly open it to see if any adhesive comes out. If it does, put the cleaned system parts back together. If it does not, there is something wrong with the cylinder or cylinder valve and it should be returned.

Solvents that can be used for cleaning nozzle, applicator gun and inside of hose: Cyclohexane, Toluene, MEK.*

***Note:** When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

J-Spray 50 Spray Adhesive

Storage

Store product at 60°-80°F (16°-27°C) for maximum storage life. Higher temperatures reduce normal storage life. Lower temperatures may cause increased viscosity of a temporary nature. Rotate stock on a "first in-first out" basis.

Shelf Life

When stored at the recommended conditions in the original, unopened container, this product has a shelf life of 15 months from date of shipment.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that JDR believes are reliable. However, many factors beyond JDR's control can affect the use and performance of a J-DRain product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the J-DRain product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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