

3M Industrial Adhesive 4550

Technical Data

February, 2015

Features

- 3M™ Industrial Adhesive 4550 is a sprayable, synthetic elastomer based adhesive for bonding many lightweight materials such as felt, cork, cardboard, and paper to metal and other substrates.
- Ideal for palletizing “all-plastic” shipping bags. Holds bags in place during storage and shipment. When unstacking, bags separate easily with no bag tearing.
- Fast tacking; ideal for low pressure spraying with minimal misting and cobwebbing. Offers high coverage and long bonding range.

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:	SBR
Color:	Translucent
Solvent:	Isohexanes, Cyclohexane
Net Weight (approx.):	6.4 - 6.6 lbs./gal.
Flash Point:	-20°F (-29°C) (TCC)
Solids (by wt.):	36 - 38%
Viscosity (approx.):	100 - 4000 cps
Brookfield Viscometer:	RVF #4 Spindle @ 20 rpm, 80°F (27°C)

Handling/Application Information

Directions For Use

Palletizing Plastic Bags

1. **Application:** Spray a uniform line of adhesive down center of bag. Bags can be palletized immediately or within 5 minutes depending upon temperature, humidity and air movement. Best results are obtained if the bags are palletized when the adhesive is aggressively tacky.
2. **Drying Time:** Palletized bags may be handled immediately. Strength of bond increases over a period of 24 hours.

Handling/Application Information *(continued)*

Directions For Use

General Bonding

1. **Surface Preparation:** Surfaces must be clean, dry and dust free. Wiping with a solvent such as methyl ethyl ketone (MEK)* will aid in removing oil and dirt.
2. **Application Temperature:** For best results, the temperature of the adhesive and the surfaces being bonded should be at least 65°F (18°C).
3. **Application:** Stir or agitate well before using.

Porous Surface(s): Brush, spray, flow or roll a uniform coat on the least porous surface to be bonded. Bond immediately, applying pressure to ensure contact.

Non-Porous Surface(s) (or for higher immediate strength): Apply a uniform light coat on each surface. Allow the adhesive to dry until it is tacky. Then apply sufficient pressure to ensure intimate contact.

4. **Cleanup:** Excess adhesive may be removed with a solvent such as 3M™ Scotch-Weld™ Solvent No. 2.*

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

Application Equipment Suggestions

Note: Appropriate application equipment can enhance adhesive performance. We suggest the following application equipment for the user's evaluation in light of the user's particular purpose and method of application.

1. **Pumping:**

A 2:1 divorced design pump is suggested. All material hoses should be nylon or PVA lined. Packings and glands, in contact with the adhesive, should be PTFE.

2. **Spray:**

Production Type Spray Equipment

Spray Applicator	Air Cap	Fluid Tip	Air Pressure	Approximate Air Requirement*	Fluid Flow**
DeVibiss JGA	45	FF	25 psi	3 CFM	6-15 fl. oz./min.
Binks No. 95 or 2001	66S	63C	25 psi	3 CFM	6-15 fl. oz./min.
Flow Volume Spray Equipment					
DeVibiss MSA	944	F	25 psi		6-15 fl. oz./min.
Binks No. 370A	85F	85	25 psi		6-15 fl. oz./min.

*3/4 H.P. Compressor for intermittent use. (1/3 H.P. for low volume)

1 H.P. Compressor continuous use. (1/3 H.P. for low volume)

**To Measure Fluid Flow: Pressurize fluid source only; pull trigger, flow material into measuring device for 60 seconds, increase or decrease fluid source pressure to obtain desired fluid flow.

3. **Brush/Roller:**

Typical brushes/rollers designed for oil based paint may be used.

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4550

**Typical Adhesive
Performance
Characteristics**

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Adhesion: 180° peel strength was measured on cotton duck to galvanized steel bonds. The bonds were made by applying the adhesive to both surfaces, joining the surfaces, and aging for 24 hours at room temperature and 48 hours at 120°F (49°C).

Results:

Scott Tensile Tester (2 in. per minute separation rate)

Peel Strength

12 piw

Storage

Store product at 60-80°F (16-27°C) for maximum storage life. Higher temperatures can reduce normal storage life. Lower temperatures can 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 6 months from date of shipment.

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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.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product 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. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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