Product Datasheet

SP&S Specialty Polymers and Services

Rubr-Weld™ 188-2 Adhesive

SPRAYABLE RUBBER CONTACT ADHESIVE

Rubr-Weld 188-2 is a general purpose, rubber contact adhesive that will bond most materials. When cured the Rubr-Weld 188-2 provides tough, flexible bonds that resist chipping and peeling and remain flexible over a wide range of temperatures. Bonds produced with Rubr-Weld 188-2 are resistant to vibration, mechanical shock, mold, fungi, oxidation, moisture, and many chemicals. When cured the Rubr-Weld 188-2 provides excellent dielectric insulating properties.

For applications where penetration into the substrates is not desired higher viscosity versions of this product are available. Other custom variations – such as custom color or viscosities are available on request. Please contact us to discuss your application if you think such a variant would be helpful for your application.

APPLICATIONS & BENEFITS:

- Sealer/waterproofer for awnings, tarps, outdoor furniture, & above water surfaces of watercraft
- Excellent for assembling electrical and electronic equipment
- Excellent adhesive bonds to metal, plastics, stone, concrete, drywall, ivory, ceramics, glass, rubber, and paper
- Excellent for seaming and splicing belts, hoses, gaskets, and other rubber parts.

HANDLING PROPERTIES	VALUE	TEST METHOD
Base Materials	Synthetic Rubber in Solvent	
Color	Translucent white (custom colors available)	
Odor:	Ketone	
Density	0.84 g/cm³	ASTM E-201
Weight per gallon	7.03 lbs/gallon	ASTM E-201
Viscosity @ 25ºC, Spindle 2 @ 20rpm	1500 cps	ASTM D-2393
Percent Solids (non-volatile %)	15 - 20%	
Flash Point (SETA)	<0°F	
Typical coverage	200 – 220 sq.ft / gal / dry mil	
Drying time:	24- 48 hours @ room temperature or 8-24 hours @ 110°F, or 2-3 hours @ 150°F, or 10 – 20 minutes @ 200°F or 5-10 minutes @ 300°F	
Curing time:	At room temperature full curing will take 3-7 days. At 220°F curing will be completed in 1-2 hours or in 30 – 45 minutes at 250°F or in 15 – 30 minutes at 300°F	

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Color	White, semi-opaque	Visual
Peel Strength	>12 pli	ASTM D903
Lap Shear Strength (steel to steel)		ASTM D1002
@ 25C	>1200 psi	
@ 50C	>500 psi	

NOTE : Values are based on laboratory or average production results – not for specification purposes.

SUGGESTED PROCESSING GUIDELINES:

Apply by brush, roller, spraying, roll coating, or knife coating. If spraying or for a lower application viscosity or longer open time, the adhesive may be thinned with ketones such as Acetone, MEK or MIBK or if other solvent types are desirable ethyl acetate may be considered. However, the addition of additional solvent will reduce the solids content and will increase the dry time.

Stir the product to achieve a uniform consistency prior to use and be sure that any surfaces to be coated or bonded are clean and dry. If possible, abrade and/or heat surfaces to be bonded to about 100°F prior to applying the adhesive. Abrading the surface gives more surface area for bonding and more mechanical interlocking of the adhesive with the surface. Mildly heating the surface will improve surface wetting and speed the solvent evaporation from the adhesive.

There are 3 primary processing methods which should be considered:

- **Wet Bond Method** – this is the simplest method to use and is suitable whenever the materials being bonded are porous and will allow the solvent in the product to evaporate. The Wet Bond Method is achieved by simply applying the adhesive in thin layers to both surfaces to be bonded, allow the adhesive to dry for 3-5 minutes or until a highly tacky surface develops, and finally press together the surfaces using the even pressure of 25 – 200 psi. Hold the pressure for 15 – 24 hours. Note: for rubber bonding – use only the minimal pressure necessary to prevent distortion of the rubber which can weaken the bond lines. The drying times reported on the previous pages will give some idea of the time for the adhesive to fully dry. Once the bond-line is fully dry, most general use can begin, but exposure to weather, chemicals, or high mechanical loads should wait until the full curing time as elapsed.

- **Solvent Reactivation Method** –this method involves applying a thin coating of the adhesive to all of the surfaces to be bonded, then allowing the adhesive to dry as per the drying times on the previous page. Protect the coated surfaces from dust and other contaminants prior to bonding. Once ready to bond, one or both surfaces with the adhesive should be re-wet with MEK or other solvents to reactivate and re-tackify the surface. This can be achieved by wiping, brushing, or spraying the solvent on the surface and allowing it to soak in for a few seconds. Once the surface is tacky, quickly assemble the substrates and apply pressure as mentioned above in the Wet Bond Method. This processing method and the Hot Bond Method are suitable for bonding non-porous surfaces or where the highest bond strengths are desired.

- **Hot Bond Method** – In this method, adhesive application and drying are accomplished as for the Solvent Reactivation Method. Again the surfaces should be protected from contamination until ready for bonding. Once ready to bond, assemble the parts to be bonded and place the assembly into a hot press and use the maximum time, temperature, and pressure suitable for your application to achieve a strong bond. The following guidelines are suggested:
  - **Time**: 5 – 25 minutes
  - **Temperature**: 180°F to 225°F
  - **Pressure**: 25 – 500 pounds per square inch

  Generally it will be possible to remove the assemblies from the press while they are still hot, but test for suitable bond strength on first articles and after any changes in processing.

Please note: it is the temperature of the bond-line, not the press that is important, so the Thermal conductivity of the materials being bonded will influence the time and temperature necessary to achieve a strong bond.

For small bonded parts or small assemblies, Oven Bonding using small clamps to apply even pressure may be used rather than a hot press. Oven times of 1-2 hours at 180°F, 20 – 45 minutes at 200°F, or 10 – 20 minutes at 225°F are suggested. It is generally best to allow the parts to cool to room temperature prior to removing the clamps to prevent any disturbance of the hot bondline.

STORAGE GUIDELINES:

Store this material in a clean, cool and dry environment out of direct sunlight and away from heat, sparks, or flames. Tightly reseal containers after use to prevent evaporation. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

PERSONAL HYGIENE:

Rubr-Weld 188-2 Adhesive

DANGER - FLAMMABLE: AS WITH ALL INDUSTRIAL MATERIAL USE CAUTION AND PERSONAL PROTECTIVE EQUIPMENT WHEN WORKING WITH THIS MATERIAL. Avoid breezing vapors. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Extended exposure could cause irritation of the nasal passages, eyes, or skin. Wash thoroughly after handling. Use only with adequate ventilation. Do not take internally.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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