EPDM coatings
THE ONLY LIQUID EPDM PRODUCT IN THE WORLD

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Liquid Rubber EPDM Manual Application

Liquid Rubber EPDM can be applied directly on many types of surfaces with solid, stable, non-porous and uniform surfaces such as flat roofs. For most surfaces, primers are not necessary. As an example, some types of surfaces that can be coated with **Liquid Rubber EPDM** are as below ;

- EPDM Rubber Sheets / Roofs
- Galvanize Steel Panels / Roofs
- Non-Polished Aluminum Sheets / Roofs
- Steel Plates (Painted, Unfinished, Light Corrosion)
- Fiberglass Panels / Roofs
- Wood & Plywood (treaded with oil based sealer)
- Non-porous / steel troweled concrete surfaces / masonry

Though, **Liquid Rubber EPDM** can be applied using airless spray equipment, this document deals with manual applications – recommended for surfaces of less than 20,000 sq.ft. Please contact us for procedures on using spray equipment.

Besides flat and sloped surfaces **Liquid Rubber EPDM** have enough consistency so that it can also be applied on vertical walls / surfaces, to about 20 mils dft. or thinner per coat. The prime considerations when applying on sloping / vertical surfaces should be safety and falling hazards.

Read all literature, directions on labels and work in a safe manner.

Planning

Work on days when rain is not expected, and in temperatures of 65 to 75 deg. F. for comfort. The curing process requires an ambient temperature of between 55 deg. F to 140 deg. F. As an estimate, you will need about 3 to 6 hrs to apply **Liquid Rubber EPDM** on a flat (horizontal) surface of 240 sq.ft.. This does not include surface preparations time (cleaning the surface). Allow another16 to 20 hours after application, before the surface is dry to the touch and will take foot traffic.

Although **Liquid Rubber EPDM** will immediately waterproof, even when wet, avoid heavy rain until dry to the touch (16 – 20 hours after application). Pitting may occur otherwise. A full cure will be achieved in 4 – 10 days after application, in consistent 70 deg. F. ambient temperatures. Higher temperatures will accelerate cure times and lower temperatures will extend cure times.

Pre-Application Inspection of Roofs / Surfaces to be coated

Inspect your roof / surfaces for structural damage, tears, leaks, gaps, corrosion, etc. Light surface corrosion if adhering well to the roof / surface can be either lightly sanded-off or may be left in place. Heavy corrosion should be removed and a good corrosion inhibitor / primer should be applied – check with the primer manufacturer and wait for the recommended dry time before applying **Liquid Rubber EPDM** over these areas.

With heavy leaks, inspect the wood deck (or roof structure) for structural damage (rot) and under skin corrosion. Any type of coating, including **Liquid Rubber EPDM**, will not fix structural damage and under skin corrosion by itself. Any structural fault should be fixed first, under skin corrosion should be stopped, metal roof skins should be replaced if corroded too thin, prior to applying **Liquid Rubber EPDM**.

Under skin corrosion may be due to; trapped moisture between the skin and the roof structure, degradation of glues used to bond the skin and the roof deck, and or a combination of these. In such conditions, the damp area, acts as an electrolyte, causing galvanic corrosion. This corrosion will propagate under the skin and will eventually corrode through and fail, irrespective of whatever coatings are applied on the topside of the skin. Galvanic corrosion can occur with all types of metal roofs including aluminum.

Dampness may also rot wood roof deck / structure sections, compromising the structural integrity of the roof / structures. Such rotten sections should be replaced. All dampness and old glue removed and re-bonded with quality glue or refastened mechanically. In situations where leaks have occurred, but no structural damage or rot has set in, be sure to dry the wood roof deck / structure and under skin, prior to sealing leaks and coating with **Liquid Rubber EPDM**.

Surface Preparations

After inspection and repairing structural faults and under skin corrosion, any asphalts or silicone type of caulking on the roof / surface, should be removed. Asphalt products are not compatible with **Liquid Rubber EPDM**, silicone rubber and **Liquid Rubber EPDM** will also not adhere to each other, and should be avoided.

Any holes, gaps, seams, tears (of more than 1/16" wide) should be repaired or reinforced. Any potential weak areas should be reinforced (consult with our Technical Service Department and ask for detailed reinforcing procedures). Holes and low spots should be filled with non-silicone caulking, or epoxies to "plug leaks" and level "low spots".

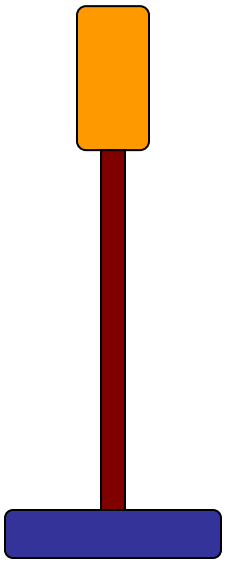
Prior to coating, thoroughly clean and wash the surface with detergent (soap) and water, ensuring the surface is free of oils, dirt, debris and flaking paints, etc. If the surface has fungus, molds, algae or other biologicals, you may need to soak these areas in a 1/3rd bleach and water solution to kill the biologicals. Let soak until the solution evaporates to kill the biologicals.

You will still need to scrub (with a stiff brush) these areas with soap and water after soaking with the bleach solution, as some biologicals anchor onto some types of surfaces and must be mechanically removed even after killing.

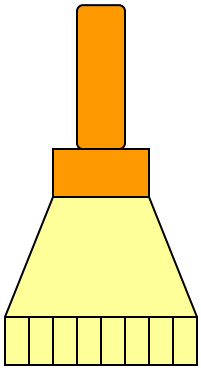
Thoroughly dry the roof prior to applying **Liquid Rubber EPDM** after cleaning. Unwanted splatters and drippings can be cleaned off with rags and xylene or mineral spirits when wet (within 4 hours after application).

Applying Liquid Rubber EPDM

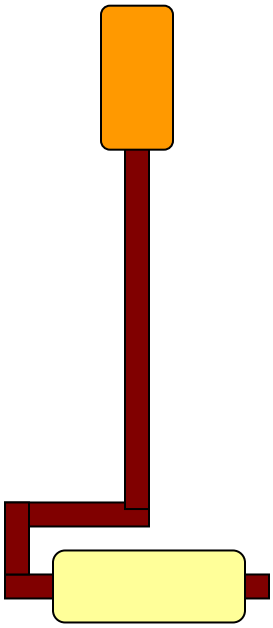
You will need an electric drill (not cordless), a mixing shaft, a mop handled rubber squeegee, a mop handled short nap roller and a paint brush to apply **Liquid Rubber EPDM** manually.



Broadcast & Spread using a rubber squeegee.



Use a brush for hard to Reach areas.



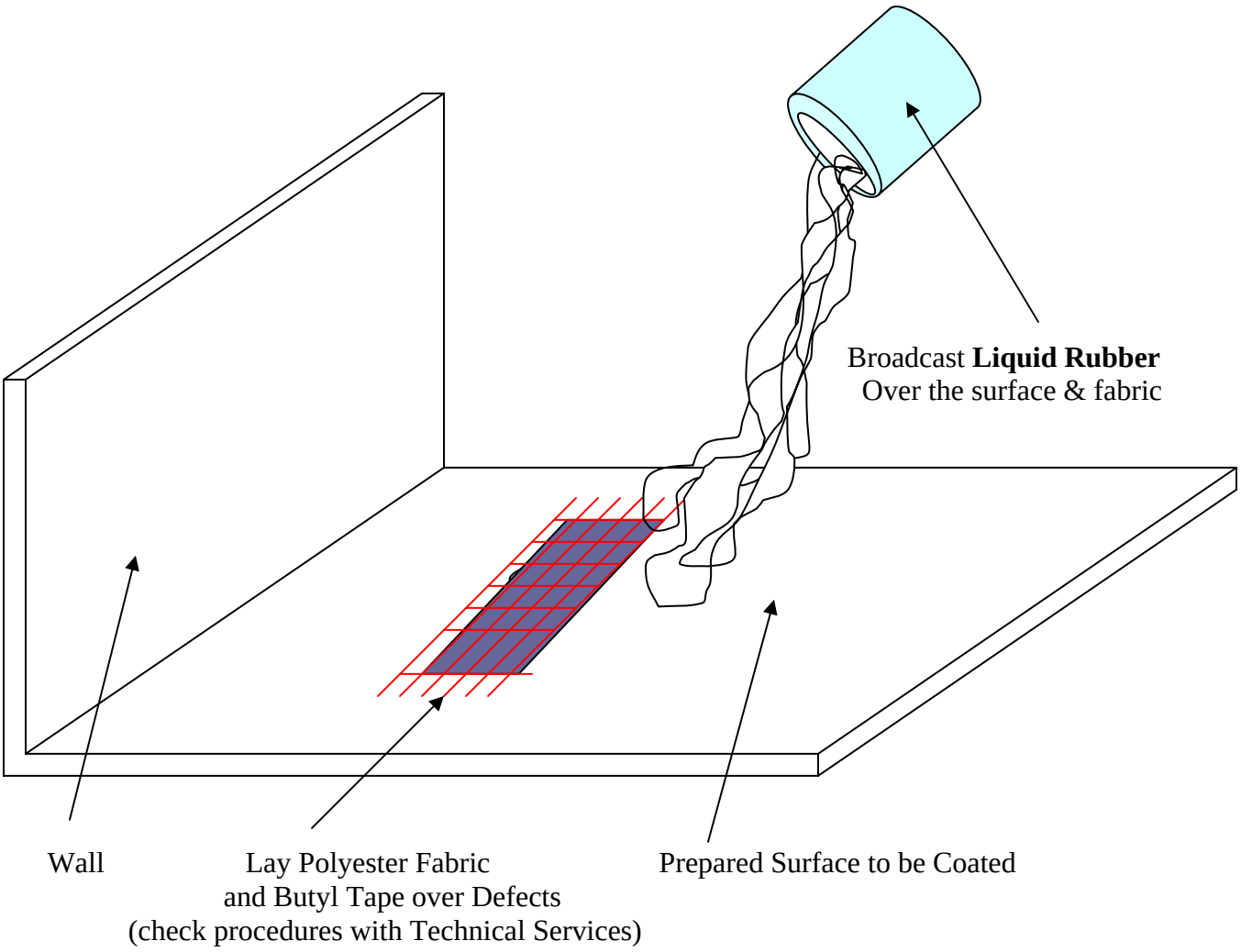
Use a short nap roller to smooth out entrapped air and to evenly distribute the **Liquid Rubber EPDM** (Short Nap = ¼ “)

Using long mop type handles for the squeegee and the roller, will allow you to apply the product standing up and not on your knees. Standing up will be much easier than on your knees.

It is important to apply an even distribution of **Liquid Rubber EPDM** and at the correct thickness. Too little materials will produce too thin of a membrane, with inadequate adhesion and inadequate film strengths. Too much material will be wasteful, may cause under cure situations / long cure situations and may cause excessive swelling with some types of sheet rubber roofs.

The optimum thickness for most purposes (non-immersion conditions) is one coat of 20 mils dft.

A) Clean and prepare the surface to be coated as directed.
B) Reinforce with Butyl Tape & Polyester Fabric if needed (gaps, tears, seams, pin-holes, defects, etc.) – check with our Technical Service Department for procedures.
C) Catalyze and apply **Liquid Rubber EPDM** on the surface / roof as described, use a squeegee, roller and brush to ensure an even application of 20 mils dft.



To achieve a 20 mils dft. thickness, you should do a spreading rate calculation. For fairly smooth surfaces such as EPDM sheets, un-polished metals, fiberglass roofs, etc., use a spreading rate of about 40 sq.ft. a gallon. Reduce this for rougher surfaces, e.g., for surfaces such as steel troweled concrete surfaces, use a spreading rate of about 30 sq.ft. a gallon.

When calculating applied surface area, ensure you measure **true surface areas.** Example; if a panel is corrugated, take into account the corrugations in calculating the surface area of the panel.

If you have not applied **Liquid Rubber EPDM** before, we would recommend you apply this in several pre-measured sections. The first section will give you a feel for the product and how fast you are able to apply this. You can then do larger areas in subsequent sections.

We recommend on the first section, you apply 2 gallons first, over a pre-measured 80 sq.ft. section By applying all the 2 gallons over this 80 sq.ft. area, in an even application, you will form a 20 mil dft. thickness when cured. The key is to spread the product evenly – not thick in some sections and thin in others. In 75 deg F to 85 deg F, the product will start to thicken up in about 4 hours, so you should plan your (work sections) with in that 4 hour time frame or less.

The first 2 gallons should not take you more than an hour, maybe two, but this will give you an idea of how fast (or slow) you can work. On subsequent sections, you may choose to put, say, 5 gallons over 200 sq.ft. sections, if it only took you an hour to do the first 80 sq.ft. section.

When ready to apply the first 2 gallons, follow the directions on the cans. Using an electric drill with a mixing shaft, run the shaft in the 2 gallons of **Liquid Rubber EPDM** (in a larger mixing container) until a vortex form. Pour the pre-measured (2 bottles) of catalyst into the vortex and let the drill run for about 15 to 20 minutes to thoroughly mix the **Liquid Rubber EPDM** with the catalyst. The catalysts are in plastic bottles and are bluish-purple in color. You will be able to see the bluish catalyst mixing into the **Liquid Rubber EPDM** if white. **Liquid Rubber EPDM** also come in gray and black.

Pour the catalyzed 2 gallons of **Liquid Rubber EPDM** onto the pre-measured 80 sq.ft. area in a serpentine manner. Use the rubber squeegee to quickly spread the product over the 80 sq.ft. as evenly as you can. Again, it is stressed that an even application is important. Do not have certain areas thick and other areas thin.

Use the squeegee to broadcast the **Liquid Rubber EPDM** quickly. The short nap roller (¼ " nap) is used to promote a more even distribution of product and to get trapped air bubbles out. After spreading with a squeegee, go over this area with the roller in slow long even strokes. Let the materials dictate your speed – so the roller does not pull materials along. Do several strokes with the roller to get an even and bubble-less application – turn the strokes 90 degree and continue the long even strokes over the same area. Use a paintbrush for nooks and crannies and areas where using a roller may be difficult.

You may initially see some roller / brush strokes. **Liquid Rubber EPDM**, however, is self-leveling and these roller / brush strokes will level off, after application.

By applying an even thickness of 2 gallons of **Liquid Rubber EPDM** on an 80 sq.ft. pre-measured area, you are ensuring the correct dry film thickness is achieved. When applying the next section, overlap an inch or two and blend in the overlap so you have a continuous and seamless membrane when cured

In 70 deg F., the applied **Liquid Rubber EPDM** will be dry to the touch in about 16 to 20 hours. This will still not be fully cured, but you will be able to walk on the roof / surface. In these temperatures, your newly applied **Liquid Roof** will be fully cured in about 4 to 10 days. Higher temperatures will accelerate the curing time and visa-versa, lower temperatures will prolong the curing process.

On some materials, such as EPDM rubber sheets, some swelling may occur due to solvent absorptions after applying **Liquid Rubber EPDM**. This is normal. This swelling will recover (shrink back) with time and heat. In 80 deg. F or so, allow 7 to 14 days to recover. In colder temperatures, recovering will take several weeks, as much as 6 to 8 weeks in 60 deg. F.

Some adhesives (used to bond the rubber sheets to the wood deck / structures) on existing structures, may degrade or of a poor quality and may not re-bond to the roof deck when recovered. Should this condition occur, you might need to re-bond the sheet rubber onto the roof deck with quality adhesives. As we have no control over the type of adhesives used on existing structures, we cannot be held responsible for such occurrence.

Using **Liquid Rubber EPDM** too thickly on a single application, will also cause excessive swelling and longer recoveries, thick single coat applications should be avoided. Overly thick (single coat) applications will take too long to cure, or for all intent and purposes, may not cure in the center.

Multiple Coats of Liquid Rubber EPDM (Thicker Membrane)

For roofs and other non-immersion applications, one coat of 20 mils dft of Liquid Rubber EPDM is adequate, however should for some reason, you require more than 20 mils thickness, you may apply multiple coats of 20 mils dft. to build up thicker membrane and for extra protection.

For multiple coats, apply the first coat as described above and allow to partially cure after approximately 12 to 18 hours in 70 deg. F. Apply a second coat (within this 12 to 18 hour window), again, using a spreading rate of 40 sq.ft. a gallon, as applied in the first coat. On curing this will form a thicker, stronger, and more homogenous, bond between the first and second layers.

Repeat this process for subsequent multiple coats.

You will also be able to coat over cured existing Liquid Rubber EPDM, years after the first application. Clean and dry the surface as described above under Surface Preparations. No primers are necessary when recoating over Liquid Rubber EPDM.