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## Joseph David Roofing Newsletter

Summer

2019

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### A Note From Joe



Hello Everyone,

Summer is here and the heat has really been blazing down on us. One way to beat the heat is to spend some time inside. Roofs act as a barrier between your house and the sun, which keeps you cool and protected. White roofs, such as PVC and TPO roofing systems, do particularly well at keeping the building cool since they attract less heat.

In this newsletter you will see a short article on the

**Hello,**

Welcome to the Summer edition of our quarterly newsletter! I hope you found some useful information in our previous issues. As always, you can revisit them on our [website](#). Below you'll find the latest updates from Joseph David Roofing!

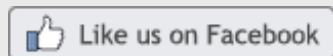
## PVC/TPO Roofing Systems

differences between PVC and TPO roofing systems. You can also learn about a recent project we've done. If you are in need of any roofing services, find a coupon at the bottom for happy savings!

You can also find many more helpful roofing tips and solutions on our website, so we hope you'll take a look around and give us a call with any questions or comments!

Have a safe and happy summer from all of us at Joseph David Roofing!

Sincerely,  
Joe David



Member Of:



NJBIA



One of the most important factors to consider when looking into replacing a roof is the materials that will be used to create that new roof. When it comes to flat roofs, there are two very popular choices for material, which are TPO and PVC. TPO and PVC are both roof systems that are installed with flat roofs. They each have advantages and disadvantages that must be considered when deciding which one to choose. This article will detail that advantages and disadvantages of each roofing system to help you make the best decision when it comes to which material you choose to use for your new roof.

First it is important to note the similarities between TPO and PVC roofs. TPO, which stands for Thermoplastic Olefin and PVC, which stands for Polyvinyl Chloride are both white membrane roof systems. Both TPO and PVC are thermoplastic, which means that they are both substances that become plastic when they are heated and harden when they are cooled. They are both installed by welding together the seams using high-heat (the temperature for each is different). Both systems are typically light in color and have both cool reflective and energy saving properties. TPO and PVC can both be installed fully adhered, which is when the entire membrane is bonded to the insulation allowing for a more aesthetically pleasing product. They can also both be mechanically attached, which is when the rigid insulation is attached to the deck using plates and fasteners allowing for quick installation and high performance. Lastly, both systems can be ballasted, which is

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when rigid insulation is loosely installed with plates and fasteners similar to mechanical attachment, then a membrane is installed over the rigid insulation, after which membrane flashing and detail work is completed, to finish with 10-15 pounds of ballast stone per square foot being installed. Each system comes in varying thicknesses, PVC ranging from 0.036 to 0.09 and TPO ranging from 0.045 to 0.08. Lastly, both systems are also highly flame resistant.

Polyvinyl Chloride roofing systems or PVC is composed of ethylene and chloride. The ethylene is produced from petroleum or natural gas and the chloride comes from salt. PVC also contains plasticizers, stabilizers, ultra-violet light inhibitors, biocides and polyester or fiberglass reinforcement, which allows PVC membranes to be much more flexible and durable than TPO. PVC has been around much longer than TPO having been implemented in roofs since the early nineteen-sixties and has been used in both commercial and residential roofing. There are many advantages when installing a PVC roofing system. The major advantage of PVC over TPO is that it has been around for much longer, which provides this particular roofing system with a plethora success stories within the past 50 years giving it a proven track record. PVC also has the strongest seams compared to TPO and other roofing systems, which is typically the weakest part of a roof. PVC also has excellent chemical resistance, which can be seen in the chart to the right. PVC is also able to withstand large amounts of grease, which makes it a prime choice for restaurants and other buildings that produce a lot of grease or other chemicals. Another advantage that PVC has over TPO is that it starts out much more flexible than TPO does. This is due primarily to the chemical composition of PVC and allows for PVC to be installed much easier than TPO.

Although there are many advantages with PVC, there are also many disadvantages. One of the largest disadvantages of installing a PVC roofing system is the cost. PVC roofing is much more expensive than TPO is. Another disadvantage of PVC roofing is that because of the plasticizers that are used to construct PVC, the roof can often shrink, which causes the membrane to pull away. This happens because the plasticizers start to break down and travel closer to the surface of the outermost layer, which results in the shrinkage of the membrane. Another disadvantage is that if a PVC roof is not reinforced, it can eventually shatter due to extremely low temperatures. Another drawback of PVC roofing is that it is not very environmentally friendly due to the toxins produced during creation and toxins released throughout the burning process. Some countries have actually banned PVC roofing for this reason. Lastly, PVC membranes vary and not all membranes are compatible with different PVC manufacturers. Therefore, the same manufacturer must be used for all PVC installation.

Thermoplastic Poly-olefin roofing systems or TPO are made out of rubber, ethylene and propylene all bound together. Once these materials are bound together fillers, such as talk, carbon filler and fiberglass are added to the mix, which work to reinforce strength and durability. TPO roofing is new to the

game. It was introduced as a roofing system in the late eighties and the formula has not been perfected yet - it has changed multiple times since TPO was first introduced (it has been through at least three different generations) and is still changing. However, this means that in the end it will most likely be a better and stronger product. TPO has many advantages and disadvantages similar to PVC. One of the largest and most notable advantages of TPO is that it is much cheaper than PVC. TPO's composition allows for it to be very durable and resist dirt, algae, bacteria and debris. Because it does not contain any plasticizers, it does not have the shrinkage problem seen with PVC roofs. Another advantage of TPO is that it is extremely environmentally friendly. They are often times ENERGY STAR® qualified and Leadership in Energy and Environmental Design (LEED) and Cool Roof Rating Council (CRRC) certified.

Although there are many advantages with TPO, there are also many disadvantages. One of the major drawbacks or disadvantages of TPO roofing is that it is subjected to accelerated weathering and aging when exposed to extensive thermal and solar power. Also another large disadvantage of TPO roofing is that because it is still essentially a new product in the roofing world (with only about thirty years existence), it is still being reformulated to reach its best possible composition. Over the years there have been many recalls on TPO membranes due to faulty chemical makeups. Broken seams, membrane failure and leaks have all been reported with TPO roofs, on top of failure due to heat. On top of performance failures, TPO is more difficult to install than other membranes, such as PVC. Although both membranes are installed using heat welding, TPO membrane welding is a more arduous process and requires extensive experience, which means that some contractors may not have the ability to install TPO.

Replacing a new roof is an important decision that should not be taken lightly. When one is looking to install a new roof, they should consider all their options. If a contractor is pushing one membrane, it is important to be educated on both the advantages and disadvantages of that membrane and it is important to be educated on other membranes also so one can make an informed decision on whether they want to go with that particular membrane or with a different one. Of course there are ups and downs for each membrane, nothing is perfect. If you would like to learn more, you can see an extended version of this article on our blog, which also discusses the advantages and disadvantages of EPDM.

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**Check Out a Recent Project!**





## Cranford Alliance Church (7 Cherry Street, Cranford, NJ)

We were hired by the church to solve their roof leaks. We removed the existing layers of roofing and installed a new GAF 60 mil Everguard TPO membrane roof system over all the low slope areas. Over the steep slope sections we installed a new GAF Timberline asphalt shingle roof system.

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### Referral Rewards

For every complete roof referral you send our way that becomes a client, you will receive a \$100 Gift Card:

Get a Gift Card To The Store Of Your Choice: Home Depot, Target, Or Starbucks!

By referring your family, friends & neighbors, you've helped our business grow. Offering these special rewards is our way of saying, "Thank you; you're the best!"

Without you, we couldn't do what we do. To take advantage of our Referral Reward Program, just fill out the enclosed referral sheet and either fax or send it in. Or feel free to send us an email with the same information. That's all there is to it!

If you use this form, we will be able to make sure you get credit for all of your referrals when they become clients. If you have any questions, just give us a call at (908) 925-0007!

Name: \_\_\_\_\_ Phone#: \_\_\_\_\_

Referrals: If you run out of room, please feel free to use a separate sheet of paper.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City State Zip \_\_\_\_\_  
Phone \_\_\_\_\_

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*Thanks for taking the time to read our newsletter!*

**Sincerely,**

Joseph David  
Joseph David Roofing

**Save 10%**

Mention our newsletter for 10% off your next residential or commercial roof repair!

Offer Expires: August 31, 2019