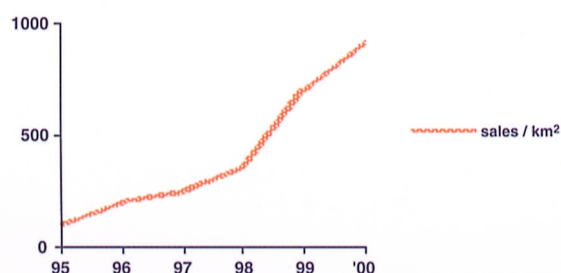


Editorial

The Distributors Meeting held in Marano Ticino in January provided a good opportunity to evaluate the progress achieved by the Rubberfuse International Operations' group. After 5 years, most elements required to meet the targeted Unique Selling Proposal have been put together. The new division of Imper Italia operates a state-of-the-art unit to produce TPO/FPA Sintofoil, a new generation of synthetic membranes. The Sintofoil membrane, available in different types, sizes and colours, is the main component of the Rubberfuse environment-friendly quality systems. With the support of a growing number of enthusiastic partners, the sales of Rubberfuse systems have steadily grown. As a result, credibility is established: last year, Rubberfuse reached over 1% share of the European synthetic roofing market.

Further development is now the objective. To achieve this, offering quality systems is just not enough: excellence is also required on the field. This is why our efforts will be essentially focused on 2 " keys to quality ". First, the system concept will be promoted. The Rubberfuse systems include a complete line of compatible, specially designed accessories. Using these accessories is the first " key to quality ". The quality of the installation of Rubberfuse systems will be our other concern. Total quality implies the installation of the systems by Rubberfuse approved applicators. Improving training programs, field services and QC visits is the second " key to quality ". We are confident such uncompromised attitude will lead to positive results for all members of the Rubberfuse team.
 Michel Aughuet.



Launch in Croatia

Ergotech, a leading waterproofing distributor and applicator in Greece, is also a pioneer: after dealing with EPDM and other synthetic materials as early as 1980, they introduced TPO membranes in 1993 and started promoting Rubberfuse in 1995. Ergotech sold over 250.000m² Rubberfuse roofing systems since, quite a nice performance in the small but highly competitive Greek market. Such results drew the attention of Ergotech's parent company, Ravago.



Established in 1961, Ravago is a " heavy weight " in the plastics industry: to date, the consolidated turnover is close to 1 billion Euros, employees exceed 1.700 and the company is present all over the world. Ravago's main business is raw materials, but their activities now extend to manufacturing and distributing construction finished products such as insulation, geotextiles and cladding systems.

A waterproofing membrane was an obvious addition. After a thorough evaluation of the roofing market, Ravago made the decision to include Rubberfuse TPO/FPA systems in their line, as it answers the current market trends: it is environment friendly and offers top quality at a competitive price level.

Ravago Hrvatska (Croatia) has been prompt to initiate action : the certification has already been obtained from the IGH Institute, Rubberfuse has been introduced at the Zagreb Exhibition last month and a first job has been successfully installed.

We would like to take the opportunity to thank Ravago for their confidence and look forward to a fruitful co-operation between our companies.

Need an Original Roof ?

The availability of the Rubberfuse FPA standing seam profile, which successfully replicates the standing seam detail on zinc, copper and lead roof areas, gives access to roofing markets usually closed to synthetic membranes, including private housing. The first reference using this new accessory won by Rubberflex, Rubberfuse distributor for France, is the roof of a private villa in Lempdes, near Clermont-Ferrand (see picture). The owner was interested in a neat, nice looking roof, while offering long-term performance. He found the Rubberfuse proposal was the most appropriate. The system is a cold deck roof with the 1.2mm Sintofoil FB (Fleece Back), in lead grey colour, adhered on 22mm plywood using FB Adhesive.

The installation was carried out by SNEI, Rubberfuse applicator since 1995. Another major advantage of the Rubberfuse standing seam profile is flexibility, as it offers much more architectural licence to the client.



7 Years Old Job - Analysis

When a new material is introduced on the market, an obvious concern relates to its long-term performance. Today's testing technology is well developed and the evaluation of a product in the laboratory provides valid information on its life expectancy. However, most potential customers still feel that field references are also required prior to using a product for the first time.

As some Rubberfuse systems were installed as early as 1994, we are now in a position to initiate an evaluation program of ageing TPO/FPA membranes. The first project part of this program is a re-roofing carried out 7 years ago on a Michelin building in Clermont-Ferrand. A 1.2mm thick standard (non-reinforced) grey membrane was mechanically attached on the existing roof (steel deck, insulation and bituminous felt) using Rubberfuse fixings, i.e. Trilock " locking " plates and D14 fasteners. A 300g/m² geotextile was installed on the existing system as a protection layer.



Samples of the membrane, including a portion of welded seam, were taken under the supervision of CSTB, as the evaluation program is also part of the current submittal for Avis Technique. The results of the tests carried out by CSTB's and Imper Italia's laboratories clearly confirm the values initially obtained after artificial ageing.

Note: the figures between brackets are the UEAtc requirements.

• Tensile strength	UNI 8202	15N	(8N)
• Elongation at break	UNI 8202	705%	(250%)
• Tear resistance	UNI 8202	360N	(>245N)
• Low temperature flexibility	- 25°C	no crack	(no crack)
• Welded seam peel resistance	100mm/min.	min. 190N/50mm	(min. 80N/50mm)

For J-P Schillacci, Managing Director of Rubberflex sarl, Rubberfuse distributor for France, these results are no surprise: "As for any material submitted to them, Michelin's engineering services had carried out a comprehensive evaluation of our proposed system. Their knowledge of synthetic membranes (Michelin eventually manufactured EPDM sheeting years ago), coupled with specific tests, resulted in Rubberfuse being part of the few systems approved by Michelin for their roofing works " .

Since 1995, over 450.000m² of Rubberfuse systems have been installed in France, and so far they all perform as expected. Looking at the picture taken when the sampling was taken, J-P Schillacci has a final comment: " This was the first time the applicator was using an FPA membrane. If he was to install that same roof today, aesthetics would be improved, as he learned since how to better handle non-reinforced sheeting " .



Quality Corner

Why Rubberfuse Fixings ?

Applicators often ask " why should we use Rubberfuse fixings instead of others readily available on the market place"? 3 distinct issues have to be addressed to properly answer that question.

Quality

The fixings selected to be part of the Rubberfuse systems are specially designed and FM approved for mechanically attached synthetic membrane roofing systems.

The plates, for both insulation and membrane, are of the " locking " type, which prevents from fastener back-out, a phenomenon likely to occur with usual items, when the steel deck is subject to " fluttering " generated by wind forces. Furthermore, the plates are 100% plastic for optimal resistance to corrosion.

The fasteners have a \varnothing 5.5mm thread, resulting in superior pullout resistance (FM test on 22 ga. steel: 194kg) and the Senti coating allows passing 30 cycles of the Kesternich corrosion test.



Code of practice

As a wind uplift study is required prior to installing a mechanically attached roofing system, it is essential to identify the permissible load (Wad) per fixing of the proposed system. That value is determined via UEAtc wind testing and implies selecting a specific type of fixing. For Sintofoil membranes secured with Rubberfuse fixings, the Wad value per fixing calculated in accordance with the UEAtc Technical Guide for TPO (final draft, March 2001*) are:

- Sintofoil ST/1.2mm 646N
- Sintofoil RG/1.2mm 711N
- Sintofoil RC/1.2mm 776N

* Wad = Wtest x Ca (0.98) x Cd (0.90): g (1.5).

Warranty

If a system warranty is required, all components of the system have obviously to be supplied by Rubberfuse. Would a failure of the fixings due to wind uplift or corrosion occur, the responsibility will rest on the supplier of the selected fixings. In any event, we strongly recommend contacting your Rubberfuse distributor and making sure that those "non-Rubberfuse" items, if/when used, are compatible with the proposed system.

Last Minute

Imper Italia's Rubberfuse Division is publishing a new Sintofoil introduction leaflet! The look is very green to reflect Sintofoil's major feature: it is totally environmentally friendly and recyclable. The document is in line with the current leaflet but includes an updated table of technical characteristics obtained from recent certification programs relating to Sintofoil ST, FB and RG.



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Rubberfuse SLM Walkways

A constant request from architects and building owners is a protective walkway system that can be easily installed to the roof area, which can identify both exit routes and provide effective protection to the membrane where roof access is required for maintenance.

We are now in a position to provide a most appropriate answer. The Rubberfuse walkway system is based on a composite panel resulting from laminating a 0.7mm TPO/FPA Sintofoil film to 0.6mm class II galvanised steel. The bottom side has a 7m grey epoxy coating for optimal corrosion resistance.

The standard sheet size (steel) is 0.65m x 2.5m. The panels (40ea per pallet) are delivered with a selvedge to allow the walkway to be quickly and neatly hot air welded to the existing field sheet. The standard colours are light grey and lead grey. Based on minimum volume, the system can be produced in a variety of colours. Using appropriate colours (ex: lead grey walkway on light grey membrane) allows to clearly showing the passage. The advantages of the Rubberfuse walkway system are clear:

- Avoid third party product and possible warranty implications
- Full compatibility with the Rubberfuse roofing system
- Strong effective system
- Aesthetically pleasing roof finish
- Easily identified walkway roof exit system



Sintofoil RG, for Top Performance

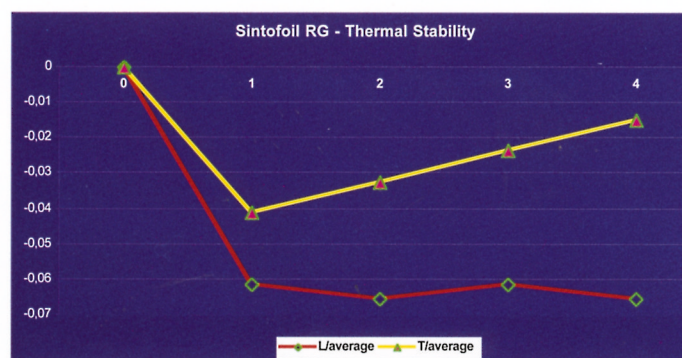
In the 6th issue of Rubberfuse newsletter, we explained why TPO/FPA Sintofoil ST (non-reinforced) is a valid, proven and competitive option for loose-laid/ballasted and mechanically attached roofing systems. While Sintofoil ST is used for over 80% of the Rubberfuse mechanically attached roofing systems installed so far, some customers however express their concern about aesthetics when this system is specified for their roof. Such concern has prompted Imper Italia to develop a line of reinforced Sintofoil membranes. The latest version, called Sintofoil RG, includes glass fibre that provides outstanding stability together with excellent wind-uplift resistance.



Neat appearance - sometimes a prerequisite

Stability

Recent tests at CSTB (France) confirmed that the specified value announced for Sintofoil RG, < 0.1%, is quite a conservative figure, as the actual results were under 0,08% (L) and 0,04% (T). The test procedure is based on the UEAtc guidelines, i.e. 4 cycles of 6 hours, with temperature varying from 23°C to 80°C.



Wind uplift resistance

As Sintofoil RG is specially designed for mechanically attached systems, another important feature is the Wad value, i.e. the permissible load per fixing. The wind uplift test carried out at CSTC (Belgium) according to UEAtc guidelines showed a membrane rupture at 6.000Pa, resulting in a very high Wad figure: 711N per fixing.

The customers who look for an environment-friendly membrane offering top performance and perfect aesthetics now have the answer: TPO/FPA Sintofoil RG.