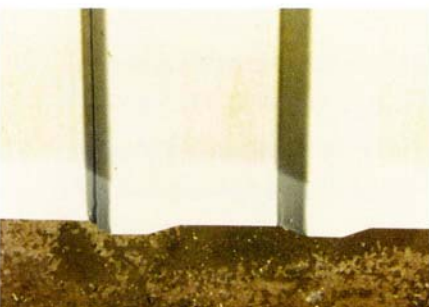


***Delvemade Limited***

**SEAMSIL®**

# Metal Edge Protection



**GE Silicones Roofing Programme**

# Metal Edge Protection



SEAMSIL® is a new flexible silicone remedial system developed by Delvemade Limited in conjunction with GE Silicones, part of the General Electric Company of America.

The system, initially developed to solve the problem of cut edge corrosion on steel roof cladding, is rapidly becoming recognised as the most versatile and effective metal edge protection treatment in any situation where exposed metal is subjected to aggressive moisture conditions.

For this reason, manufacturers across a variety of industries are specifying SEAMSIL® in the production of fabrications where resistance to corrosion damage is a requirement.

The SEAMSIL® system has been developed against a background of decades of experience of roof refurbishment and repair and is designed to be "user friendly" in application. A three stage system, comprising a gun applied sealant, a brush applied Basecoat and a brushable Topcoat, SEAMSIL® requires little in the way of expensive application equipment.

Its built in simplicity makes SEAMSIL® a most cost effective and reliable cure for edge and overlap corrosion problems.

**The problem:** The quality of coatings on metal profiled sheets has improved significantly in recent years. Nevertheless, the problems of delamination and deterioration of the coating presents an ever present risk to the integrity of roof structure and performance. Furthermore, the cut edge and overlapped joint remains especially vulnerable due to the effects of capillary action drawing sulphur contaminated rainwater into the joint causing the double hazard of "topside" and "reverseside" corrosion.

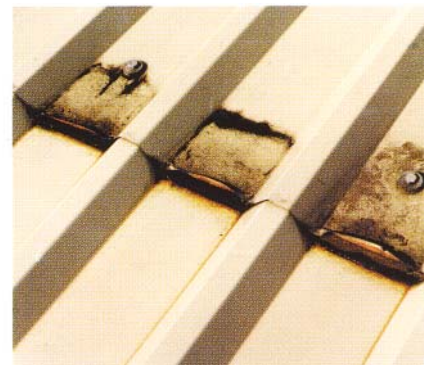
The rate of breakdown of coatings is determined by location, orientation and design. Research has shown that the dominant factor for PVC type coatings is UV

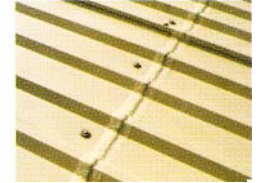
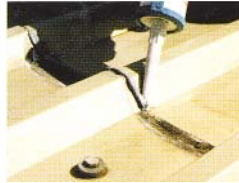
radiation and for thin Pvf2/polyester coatings, the corrosion of the zinc substrate through the permeability of the coating.

The result is an unsightly roof, scarred with lines of corrosion along the joints and random rust stains across the entire surface.

**The solution:** The first stage in reaching the solution to any problem is to fully understand the degree of degradation which has occurred. Delvemade Limited recommend that a full and comprehensive site survey is undertaken by one of its Qualified Applicators, followed by a detailed situation report. At this stage a restoration proposal is submitted highlighting remedial action to be undertaken.

Upon acceptance of the proposal and schedule of work, the affected roof area is thoroughly cleaned ready for SEAMSIL® application.





**Stage 1, Preparation:-** All loose coating, rust and zinc salts are removed through gritblasting or abrading to leave a firm, clean, feathered metal surface. Steps are taken to ensure that the underside as well as the top surface are rendered clean and dry ready for the application of SEAMSIL®

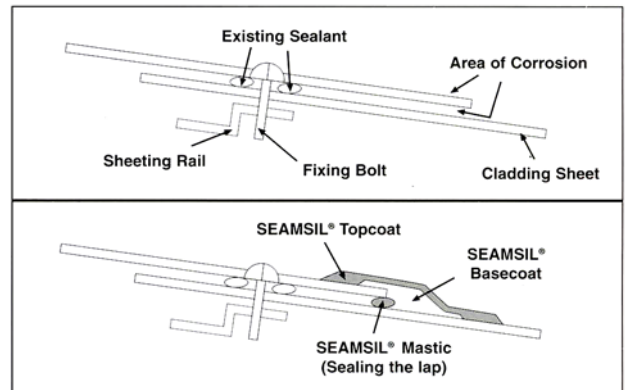
**Stage 2, Sealing the gap (overlaps):-**

The SEAMSIL® Mastic Sealant is gun-applied into the gap between the upper and lower sheets forming a complete bridged seal. This is tooled off to a neat edge prior to the application of SEAMSIL® Basecoat.

**Stage 3, Basecoat:** - One coat of SEAMSIL® Basecoat is applied to all prepared surfaces ensuring complete coverage of all exposed and prepared steelwork. The coat should cover an area of at least 25mm to either side of the joint. Brush rates are to a minimum WFT 220 microns to achieve a DFT 175 microns. The basecoat is allowed to dry, curing usually within 4 hours, depending on weather conditions. The optimum period of cure before applying the Topcoat is 24 hours. The combined effect of the Sealant and the Basecoat is to form a fillet between the sheets as seen in fig. 1.

**Stage 4, Topcoat:** - One coat of colour matched SEAMSIL® Topcoat is then applied to a minimum of WFT 235 microns to achieve a DFT of 175 microns. To prevent high edge build up, the Topcoat overlaps the basecoat by 13mm. It is essential that all lap joints are a minimum of 75mm wide and to a total DFT of 350 microns.

Special provision is made to ensure that reverse side corrosion on the gutter overhangs is controlled by cleaning and coating this area. In all cases SEAMSIL® is applied to the underside of gutter overhangs to ensure complete encapsulation of the cut edge as seen in fig. 2.



**Before and after SEAMSIL overlap detail Fig 1.**

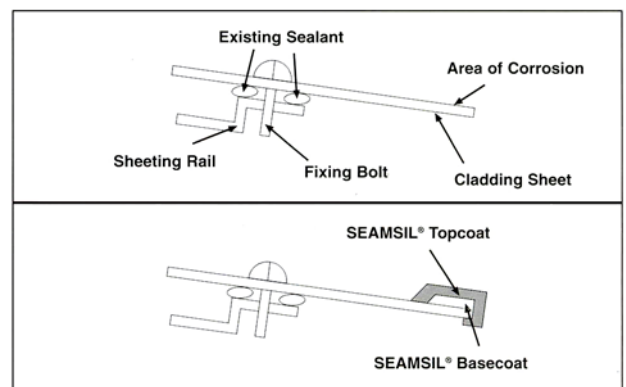
**Site Services**

The remedial treatment of steel requires more control than the coating of new structures as there are more parameters i.e. corrosion, weather etc.

Ongoing Technical Assessments carried out by the Authorised Distributors of the SEAMSIL® System are provided to ensure that each remedial project proceeds in accordance with the agreed specification. This service provides assistance to the SEAMSIL® Qualified Applicator and involves a series of site visits at critical points in order to check compliance with the specification.

The frequency of the site visits will depend upon the size and duration of the project. Every aspect of the project will be looked at to include;

- \*Standard of surface preparation
- \*Standard of application
- WFT and DFT readings
- Adhesion tests
- Overall appearance and final inspection



**Before and after SEAMSIL® edge detail Fig 2.**

# General Information

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SEAMSIL<sup>®</sup> metal protection systems are designed to provide effective long life solutions to the problems of corrosion at cut edges and overlap joints on all types of profiled metal roofs.

SEAMSIL<sup>®</sup> is a silicone based remedial treatment formulated specifically to arrest the adverse effects of rust and chemical corrosion, industrial pollution and is particularly effective in marine/coastal environments. SEAMSIL<sup>®</sup> completely encapsulates the damaged lap joint area preventing further water ingress and therefore provides maximum protection against future reverse side corrosion.

## Applications

The system can be used on both steel and aluminium claddings adhering to most coatings:

- PVC
- Silicone Polyester
- Polyurethane and most paint finishes
- PVF2/PVDF
- Acrylic

SEAMSIL<sup>®</sup> has been designed as a system specifically to treat corrosion and peel back at cut edges and end overlaps. SEAMSIL<sup>®</sup> provides the perfect answer to the effective sealing of roof lights.

## Approvals

The SEAMSIL<sup>®</sup> System is approved and recommended by most European steel roofsheet manufacturers for use as a remedial treatment for edge and lap joint corrosion problems. The products are manufactured under ISO 9002. Quality Systems approved by BSI.  
Patent Pending 9321991 SEAMSIL System.

## Delvemade Limited

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Not connected to the English company of a similar name.

SEAMSIL is a registered trade name of Delvemade Limited.

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## Protection

**Encapsulation** - SEAMSIL<sup>®</sup> silicone systems have exceptional adhesion to cleaned and prepared surfaces and cure to provide a tough elastic seal, effectively encapsulating the damaged area to restrict further deterioration.

**Long Life** - SEAMSIL<sup>®</sup> uses GE Silicone technology with its proven long life, being unaffected by UV or extremes of weather and temperature.

**Elasticity** - Silicone systems have good elastic and flexibility properties to withstand normal surface movements. This ensures continued optimum performance even in the most aggressive environments.

**Colours** - SEAMSIL<sup>®</sup> edge and overlap protection system is available in a range of colours to match the most popular shades used in industrial claddings.

Silicone systems do not degrade by chalking and do not have any self cleaning properties. Any soiling can be removed by the application of a detergent wash.

## Availability

All products within the GE Silicone Protective Coatings Programme including Seamsil<sup>®</sup> are produced in the UK by Delvemade Ltd. the G E Silicones UK manufacturing partner. The complete range is available only through Giromax Technology Ltd. the product distributor.

## Giromax Technology Ltd.

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