

Product Brochure

Fireproofing



POLYMER GROUP LTD FIREPROOFING

FIRE!



Polymer Group's primary focus is the protection and maintenance of property and assets.

Other than the ravages of a corrosive or marine environment the largest threat businesses often face is fire. The disruption to operations, loss of supply to key clients and loss of revenue can be devastating. Fires can start when you least expect them, and often for unforeseen reasons (electrical faults, lightning strikes, spontaneous combustion and arson.)

Polymer Group offers an unsurpassed range of passive fire protection products for:

- Oil and gas facilities
- Energy generation
- Pulp and paper facilities
- Commercial and industrial buildings.



PASSIVE FIRE PROTECTION

There are two ways to protect structures and buildings against fire and its associated risks: "active" and "passive" fire protection systems.

Examples of active systems are extinguishers, sprinklers, alarm and extract ventilation.

Fire-rated doors, barriers, ceilings and structural fire protection (eg by the application of intumescent coatings) are examples of passive systems.

The overall aim of passive systems is to contain the fire by:

Use of fire-rated partitions and doors to prevent the fire and smoke from moving from one compartment to another.

Delaying the collapse of the building structure.

Delaying the growth of the fire.



Why Protect Steelwork?

During a fire situation the temperatures within a building can potentially rise to anywhere from around 20°C, up to 1000°C. As the temperature in the building increases the temperature of the building's supporting steel structure approaches the critical steel temperature, ie the temperature at which the steel section begins to lose it's strength and buckle.

Building regulations require that structural steel is protected against fire, to ensure that the load-bearing strength of the steel does not decrease as a result of temperature increase.

Specifying your Fire Protection Measures

The type of protection to use normally comes down to the following factors:

- The fire rating specified, eg 30, 60, 90, 120 or 240 minutes;
- Type of steel member to be protected;
- Design requirements and aesthetic considerations;
- Weight restrictions;
- Construction time;
- Cost;
- Steel location, ie internal or external, exposure to elements, etc.

Cementitious spray systems are generally the cheapest method of protecting steelwork at 90 up to 240 minutes fire performance. However the appearance of such systems frequently limits their use to applications where aesthetics is not a concern.



Intumescent coatings are the most efficient systems at 30-, 60- and now most 90-minute fire-rating applications. Thin-film intumescent coatings have reduced in price over the past few years as a result of increased competition and improved technology. These systems offer a durable, light-weight solution, whilst allowing the steel member to remain a feature of the building design.

Our Current Range of Products

The reputable Nullifire brand (ex-UK) is extensively used and well-known within New Zealand.

Water-borne Nullifire S607 intumescent is the product of choice for most commercial applications for protection of internal structural steel against cellulosic fire up to 90 minutes.

Nullifire S605 is a solvent-based intumescent used for the protection of external steelwork up to two hours.

For protection against hydrocarbon pool and jet fires, **Nullifire System E** is an outstanding product for use at petrochemical plants, refineries and the like. This epoxy intumescent was the product of choice for the Future Fuels project at the NZ Refinery in 2005, and is being used all over the globe in similar applications.

FireFree 88 water based intumescent single component fireproofing for timber.



Continued



Nullfire products offer a range of intumescent fireproofing systems which allow architects freedom of steel structure design, where fire resistance ratings are required.



These photos taken at Lion Breweries and the NZI Building in Auckland all show the use of Nullfire S607 intumescent material.



Architectural Intumescent

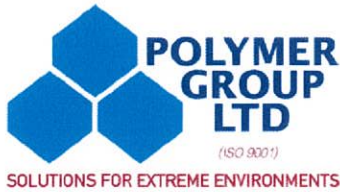


Nullfire System S Intumescent Fireproofing Systems allow the designers to express the steel structure as an art form in buildings where fire resistance ratings are required.

Industrial Intumescent



Nullfire System E is the most efficient epoxy-based intumescent coating in the market with BS476:Part 20/21:1987, UL 1709 IMO and Lloyds certification.



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Polymer Group Ltd is an applied technology company comprising a team of industrial chemists, engineers and qualified coatings inspectors which has served New Zealand industry for over 25 years.

Property Asset Protection is the company's major focus, providing proven, durable solutions for the **protection of structural steel, concrete and timber** structures.

Wear resistant, Anti-corrosive Protection Systems are engineered to provide optimum performance and extended maintenance intervals.

Surface coating Technology Advances offer multiple choices to the asset manager and civil engineer who is seeking long term solutions and minimum downtime, but not always able to provide an optimum application time frame.

Maintenance Assessments and Specification Options give the client the opportunity to inspect and discuss the asset with experienced personnel, taking into consideration the exposure environment, past performance of any existing protection systems, available downtime and other constraining influences.

Sole Responsibility Material Supply and Application Contracts provide the client with further reassurance that their protection/maintenance systems are supplied and installed by a **Quality Assured, ISO 9001:2008** company.

Solutions for your Extreme Environments!



- Jotun® Marine & Protective Coatings
- Rhino Linings® Durable Coatings
- Polibrid® Durable Linings
- Tremco® Waterproofing Systems
- Nullifire® Fireproofing