

Promat



PROMAPAIN[®] Intumescent Coating To Steelwork Fire Protection





PROMAT

INTERNATIONAL ASIA

PACIFIC PRODUCT DATA SHEETS AND

HEALTH AND SAFETY DATA SHEETS ARE REGULARLY

REVIEWED AND ARE AVAILABLE ON REQUEST.

THE SUCCESSFUL USE OF THESE PRODUCTS IS DEPENDENT ON

A NUMBER OF FACTORS. AS THE INFORMATION CONTAINED IN THIS

HANDBOOK CAN ONLY BE OF A GENERAL NATURE, IT IS ADVISABLE TO

CONSULT OUR TECHNICAL DEPARTMENT IF THERE IS ANY DOUBTS

ABOUT THE CORRECT USE OF THESE PRODUCTS

IN A PARTICULAR APPLICATION. OUR TECHNICAL

REPRESENTATIVES AND ADVISORS ARE AVAILABLE TO

PROVIDE FURTHER TECHNICAL AND COMMERCIAL

ASSISTANCE.

PROMAPAIN[®] 60 AND PROMAPAIN[®]-H INTUMESCENT

COATINGS ARE MANUFACTURED UNDER A QUALITY

MANAGEMENT SYSTEM CERTIFIED IN ACCORDANCE

WITH ISO 9002.

TO KNOW PROMAT THE PROACTIVE FIRE PROTECTION SYSTEMS PROVIDER

Promat, as part of the International Etex Group of Companies is today probably the leading manufacturer of proactive fire protection boards and systems in the world, offering an extensive range of products designed to meet the most stringent requirements of today's projects, large or small.

Based in over 20 countries worldwide, Promat's commitment to research and development is unsurpassed and is fully supported by the Group's dedicated in-house R&D organisation PRTC, based in Belgium. Continuous development to satisfy differing legislation around the world has resulted in a range of products and systems that have been tested beyond that offered by many other manufacturers' products. This affords the specifier access to a technical expertise that is unique in its depth and breadth of understanding of how products and systems will perform in the event of a fire, giving you and your client peace of mind.

As part of the continuing development process of new and improved systems, Promat Asia Pacific companies are pleased to bring to your attention a new product line of intumescent paint materials, Promat have developed these materials to offer the following:

- ① Optimum in performance both under normal and fire conditions, ensuring the stability of your building structure.
- ② Economical in application, the paint systems described in the following pages have been especially developed to provide single coat applications, with greatly reduced film thickness which can offer substantial material savings in excess of 25% over many similar products, the single coat application technique offers savings in time on site and thus labour costs.
- ③ To further improve economy of usage and application, PROMAPAINT® -H has been specially designed for use with steel hollow sections, whereas PROMAPAINT® 60 is specially designed for standard steel sections.
- ④ The vast colour range, any RAL or BS 4800 colour can be applied as a top coat to ensure the designer has the ability to allow free reign with their imagination and colour schemes.

- ⑤ Water based solutions, environmentally friendly, no dangerous chemicals or solvents required on site.
- ⑥ A wide range of top coats are available to suit all manner of environmental conditions.
- ⑦ Fire resistance to both British and Australian standards requirements for up to 90-minute applications.
- ⑧ This manual is laid out with separate tables to cover both Australian and British standard steel section sizes

This manual concentrates on only one particular aspect of the multitude of products and systems which Promat can offer. In addition, the latest edition of our *ProActive Fire Protection Systems Application & Technical Manual* is a comprehensive guide detailing some of the systems designed to provide solutions to meet the specifiers every need in relation to *ProActive Fire Protection* measures. As well, throughout the Asia Pacific region our local offices are staffed with a full technical and sales support team, available to provide information and assistance to help in the design and installation of all Promat fire protection solutions.

Whilst every effort has been made within this document to cover all of the basic construction details likely to be required on a project, it is inevitable there will be situations requiring more detailed assistance. In this event please telephone your nearest Promat office (contact details at the rear of this manual) and one of our team will be pleased to advise you.

All Promat materials are manufactured under ISO 9001 accredited Quality Assurance procedures and ISO 14000 environmental procedures. Comprehensive independent testing of all Promat products and systems has been carried out by nationally approved laboratories to meet the relevant sections of BS 476: Parts 20 to 24, AS 1530: Part 4 and many other international test standards.

A quality and excellence refined from over 40 years experience giving you the confidence to specify Promat products and systems to suit any fire protection application.

THE PRINCIPLES

WHAT IS PROACTIVE FIRE PROTECTION?

PROACTIVE FIRE PROTECTION products and systems are tested by independently approved testing authorities under standard test conditions. The fire performance standard and terms most relevant to the materials and elements of construction described in this handbook are as follows.

TEST ON MATERIALS

BS 476: Part 4: 1970 and AS 1530: Part 1: 1994

Non-combustibility test for materials.

This test classifies materials as either non combustible or combustible. It is the most stringent standard for the fire performance of materials and gives a measure of the heat and flames generated by the material under standard heating conditions. Non-combustible materials can be used without restriction anywhere in a building. Their use ensures that hazards due to smoke and toxic gases are minimised and that the fabric of a building will make no contribution to a fire. All Promat board products are non-combustible.

BS 476: Part 6: 1989

Method of test for fire propagation for products.

This test measures the amount and rate of heat evolved by the product while subjected to standard heating conditions. Test results are given as an Index of Performance (I) which is based on three sub-indices (i_1 , i_2 , i_3). The higher the value of the Index, the greater is the material contribution to fire growth. The higher the value of the sub-index, i_1 , the greater the ease of ignition and flame spread.

BS 476: Part 7: 1987

Method for classification of the surface spread of flame of products.

This test puts materials into Classes 1 to 4 in descending order of performance according to the rate and extent of flame spread over their surface under standard heating conditions. As all Promat board products are non-combustible, they are also accepted as having the highest rating in surface spread of flame test, i.e., Class 1.

AS 1530: Part 3: 1999

Simultaneous determination of ignitability, flame propagation, heat release and smoke release.

This test sets out methods for the assessment of building materials and components according to their tendencies to ignite; their tendencies to propagate flame; the heat release once ignition has occurred, and their tendencies to release smoke.

AS ISO 9750: 2003

Full Scale room test for surface products.

This standard specifies a test method that simulates a fire that under well ventilated conditions starts in the corner of a small room with a single open doorway. This standard will eventually replace AS 1530: Part 3.

Class 0 (As defined in Approved Document B)

- Composed throughout of materials of limited combustibility, or
- A Class 1 (to BS 476: Part 7: 1987) material which has a fire propagation index (I) of not more than 12, and a sub-index (i_1) of not more than 6.

FIRE TESTING METHODS

The fire performance of any system will vary depending on the heating conditions it is exposed to. Different national and international fire curves have been developed to simulate fires tests carried out in fire test furnaces, by recognised national organisations as follows:

1. The Standard Cellulosic Time-Temperature Curve

This ISO-based curve is used in standards throughout the world, including BS 476, AS 1530, DIN 4102, ASTM, and the new European Norm (EN). It is a model of a ventilated controlled natural fire, i.e., fires in a normal building. The temperature increase after 30 minutes is 842°C.

2. The Hydrocarbon Curve

This curve is a simulation of a ventilated oil fire with a temperature increase of 1110°C after 30 minutes. The Hydrocarbon Curve is applicable where petroleum fires might occur, i.e. petrol or oil tanks, certain chemical types etc. In fact, although the Hydrocarbon Curve is based on a standardised type fire, there are numerous types of fire associated with petrochemical fuels, which have wide variations in the duration of the fire, ranging from seconds to days.

3. The RABT Curve

This Curve was developed in Germany as a result of a series of test programmes such as the Eureka project. In the RABT Curve, the temperature rise is very rapid up to 1200°C within 5 minutes. The duration of the 1200°C exposure is shorter than other curves with the temperature drop off starting to occur at 60 minutes. Note that this curve has a defined cooling off period of 110 minutes.

4. The RWS Curve (Rijkswaterstaat)

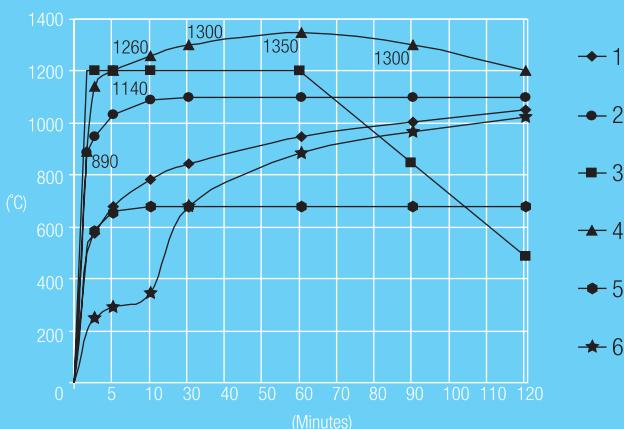
This model of a petroleum based fire of 300MW load fire in an enclosed area such as a tunnel, has been developed in the Netherlands and is specified for use in tunnels. It is internationally accepted. The temperature increase after 30 minutes is 1300°C.

5. The External Fire Exposure Curve

This model is for fire exposure external to a building and open to the atmosphere, where there are additional possibilities for heat dissipation. There is a lower level of heat exposure, and temperature increase is approximately 680°C after 20 minutes and remains constant throughout.

6. The Slow Heating Curve

This curve simulates a slow growing fire. It is basically a combination of two curves, one for the first 21 minutes representing the smouldering effect of materials and one for subsequent periods representing the growth of the fire towards flashover.



As well as controlling the exposure temperature, the test standards will require that the air pressure within the test furnace is maintained at a positive level in an attempt to create a worse case scenario and force hot gases and flame through the specimen under test. In addition, thermocouples are fixed to the unexposed face of the specimen to measure the insulation against heat provided by the construction.

FIRE TESTING PERFORMANCE

Unlike the previous tests and terms discussed, fire resistance is not a property of an individual material but is the measure of the performance of a complete system of construction when exposed to the standard heating conditions described above.

continued on opposite page

Loadbearing Capacity

The ability of a specimen of a loadbearing element to support its test load, where appropriate, without exceeding specified criteria with respect to either the extent of, or rate of, deformation (Please note that within AS 1530: Part 4, Loadbearing capacity is described by the term Structural adequacy).

Integrity

The ability of a specimen of a separating element to contain a fire to specified criteria for collapse, freedom from holes, cracks and fissures and sustained flaming on the unexposed face.

Insulation

The ability of a specimen of a separating element to restrict the temperature rise of the exposed face to below specified levels (140°C mean rise, 180°C max rise).

Stability

The ability of a system to remain in place (please note that within AS 1530: Part 4, Stability is described by the term Structural adequacy).

FIRE TESTING STANDARDS

The fire performance standard most commonly referred to in Building Codes in Asia Pacific region are the British Standards (BS 476: Part 20 to 24), Australian Standards and ASTM. The new European Norm (EN 1363~1366) will replace BS 476 gradually, and the current equivalent are as given below:

BS 476: Part 20: 1987 (EN 1363: Part 1: 1999)

Methods for determination of the fire resistance of elements of construction (general principles).

This part describes the general procedures and equipment required to determine the fire resistance of elements of construction, and should be read in conjunction with BS 476: Part 21~24 as appropriate, which describe the detailed procedure for the testing of individual elements of construction.

BS 476: Part 21: 1987 (EN 1365: Part 1~4: 1999)

Methods for determination of the fire resistance of loadbearing elements construction.

This standard describes methods for determining the fire resistance of loadbearing beams, columns, floors, flat roofs and walls. Beams and columns are assessed in terms of loadbearing capacity, whilst dividing elements such as floors, flat roofs and walls are measured in terms of loadbearing capacity, integrity and insulation.

BS 476: Part 22: 1987 (EN 1364: Part 1~2: 1999)

Methods for determination of the fire resistance of non-loadbearing elements construction.

This standard describes methods for determining the fire resistance of non-loadbearing partitions, doorsets, shutter assemblies, ceiling membranes and glazed elements of constructions with respect to integrity, and where appropriate, insulation.

BS 7346: Part 3: 1990

Specifications for smoke curtains.

This standard describes methods for determining the fire resistance of smoke curtains where those items are used as part of a smoke control system.

BS 476: Part 23: 1987

Methods for determination of the contribution of components to the fire resistance of a structure.

This standard describes test methods for

- a) determination of the contribution of suspended ceilings to the fire resistance of steel beams; and
- b) determination of the contribution of intumescent seals to the fire resistance of timber door assemblies.

BS 476: Part 24: 1987 (EN 1366-1: 1999)

Methods for determination of the fire resistance of ventilation ducts.

This standard describes the methods used to test and measure the ability of a duct assembly to prevent the spread of fire from one fire compartment to another. Results are expressed in terms of stability, integrity and insulation.

AS 1530.4: 1997

Methods for fire tests on building materials, components and structures. This standard provides methods for determining the fire resistance of ceiling systems, partitions, doorsets, shutter assemblies, damper assemblies and air ducts.

AS 4072.1: 1992

Components for the protection of openings in fire-resistant separating elements. This standard sets out requirements for determining the fire resistance of penetrations through separating building elements, as well as control joints between building elements.

LEGISLATION

The safety of life is the main purpose of control standards laid down by governments and other authorities. These controls represent minimum standards and it is desirable for designers to work to higher standards where possible. Some of the principle legislations in the Asia Pacific region are:

Australia

- Building Code of Australia 1996

The People's Republic of China

- Code for Design of Building Fire Protection (GBJ 16~17)
- High Rise Civil Construction Design Fire Resistance Standard (GBJ 45-82)

Hong Kong

- Laws of Hong Kong Chapter 123
- Fire Services Ordinance
- Code of Practice for Fire Resisting Construction 1996 Building Authority
- Code of Practice for minimum fire service installations and equipment and inspection, testing and maintenance of installations and equipment

Malaysia

- Fire Services Act 1988 (ACT 341)
- Uniform Building By-Laws 1984 (UBBL 84)

New Zealand

- Building Act 1991 Approved Documents C1~4

Singapore

- Code of Practice for Fire Precautions in Building 2002 Fire Safety Bureau (Singapore Civil Defence Force)

United Kingdom

There are about 10 National and 29 Local Acts still in force in England and Wales including London Building Acts 1930 and 1939. The Fire Precautions Act 1971, mainly deals with adequate means of escape in certain designated premises. The Building Regulations 1991, which came into operation on the 1st of June 1992, are supported by a series of guidance documents, known as Approved Documents. The Approved Document B Fire Safety provides guidance on meeting the requirements as follows:

- | | |
|---------------------------------------|----------------------------|
| ● B1 Means of Escape | ● B4 External Fire Spread |
| ● B2 Internal Fire Spread (Surfaces) | ● B5 Access and Facilities |
| ● B3 Internal Fire Spread (Structure) | for the Fire Services |

BS 5588 Fire Precautions in the Design, Construction and Use of Buildings are a series of codes of practice frequently referred to in the Building Regulations guidance documents.

INTRODUCING PROMAPAIN INTUMESCENT

Promat Asia Pacific offers a range of PROMAPAIN[®] Intumescent Coatings for structural steel to ensure that everybody's needs and applications are covered.

It is important to use the right product for your application.

This handbook sets out the products in a manner that helps the specifier and applicator pick the most economical product that is tested and approved for the application.

INIT® COATING

PROMAPAINTM 60 is a water borne product for the fire protection of interior structural steelwork for fire ratings up to 90 minutes. This product is particularly useful where the use of solvent based products are perceived to be an environmental problem e.g. for use in occupied buildings. **PROMAPAINTM 60 is ideal for use, and very economical when applied to beams and columns for 60 minutes fire rating.**

Columns with sectional factors up to $330m^{-1}$ for Fire Resistance Level s (FRL) up to 30 minutes.

Columns with sectional factors up to $280m^{-1}$ for FRL s up to 60 minutes.

Beams with sectional factors up to $330m^{-1}$ for FRL s up to 30 minutes.

Beams with sectional factors up to $330m^{-1}$ for FRL s up to 60 minutes.

Beams with sectional factors up to $160m^{-1}$ for FRL s up to 90 minutes.

For Category C1 (ISO 12944-2: 1998) PROMAPAINTM 60 can be used with and without top seal. For C2 one or two coats of top seal is required and for external use two coats of top seal is required.

PROMAPAINTM-H is a water borne product for the fire protection of interior structural steelwork for up to 90 minutes. This product is particularly useful where the use of solvent based products are perceived to be an environmental problem e.g. for use in occupied buildings or health care premises. **PROMAPAINTM-H is most economical when used for the protection of hollow sections.**

Columns and beams with sectional factors up to $330m^{-1}$ for FRL s up to 60 minutes.

Columns with sectional factors up to $210m^{-1}$ for FRL s up to 90 minutes.

Beams with sectional factors up to $185m^{-1}$ for FRL s up to 90 minutes.

Hollow sections with sectional factors up to $430m^{-1}$ for FRL s up to 60 minutes.

Hollow sections with sectional factors up to $160m^{-1}$ for FRL s up to 90 minutes.

For Category C1 (ISO 12944-2:1998) PROMAPAINTM -H can be used with and without top seal. For C2 one or two coats of top seal is required and for external use two coats of top seal is required.

PROMAPAINTM-WBT is a waterborne acrylic semi-gloss, topcoat which has excellent weathering and water resistance. This product can be applied in a single coat for internal use (if a coloured decorative finish is desired).

When PROMAPAINTM 60 or PROMAPAINTM -H is used in exposed or semi exposed conditions, apply two coats of PROMAPAINTM-WBT to ensure adequate weather resistance to the base coat. PROMAPAINTM-WBT can be supplied in BS4800 or RAL colours (see pages 17,18 and 19).

Please refer to pages 6~11 for details of PROMAPAINTM 60, PROMAPAINTM -H and PROMAPAINTM -WBT.

PROMAPAIN[®] 60



PROMAPAINt® 60 is a water borne intumescent coating for the fire protection of structural steelwork. The coating can be used for interior steel work without the addition of additional top coats. Exterior and semi exposed applications will require the addition of our waterborne acrylic topseal.

This product is particularly useful in areas where the application of solvent based products are perceived to be an environmental hazard. Examples of such areas would be hospitals and health care centres or in fact any buildings that are occupied or attached to occupied areas.

PROMAPAINt® 60 will provide up to 90 minutes fire resistance to structural steel sections. It is particularly economical for I-sections including Universal Beam and Universal Column sections, angle and channels. for hollows sections see **PROMAPAINt® -H** (see page 9).

In the majority of applications, **PROMAPAINt® 60** can be applied in one coat providing reduced application costs.

For architectural finish it is possible for a skilled applicator to apply up to 1000 microns DFT with airless sprays providing several passes are used to build up the thickness. Thickness above this may result in product slump.

TECHNICAL PROPERTIES

Colour (basecoat)	Off white
Finish	Matt
Supply containers	27kg (20 litres)
Consistency in supplied form*	Can be spray applied
Flash point	Not applicable
IMDG Code No.	NUL UN-No. Not classified
Specific gravity	1.35 ±0.1
Volume of solids	70 ±2%
Product weight	1.35kg per litre
Shelf life	15 months if stored below 30°C
Storage conditions	Store in dry, cool conditions and protect from frost
Fire resistance ratings (in accordance with the criteria of AS 1530: Part 4 and BS 476: Part 21)	From 15 up to 90 minutes
Theoretical film thickness	1mm wet (wft) = 1 litre per m ² = 0.7mm dry (dft) 1mm =1000um (microns)
Drying times**	1500um (wft) at approx. 24 hours
Mixing ratio (with water)***	Maximum 5%

REQUIRED WET APPLICATION (Approximate figures only)

Example: Wet film thickness in mm equals litres per m² (i.e. 1.2lts/m² = 1.2mm or 1200um (microns)

Period	1 hour	90 minutes
Wet film thickness	414um	2000um
Dry film thickness	290um	1400um

*PROMAPAINt® 60 can be applied in a number of ways. However, whilst brush or roller will provide a coating which will ensure the necessary Fire Resistance Level is achieved, aesthetically the finish can be poor and application is slow. Therefore, the most economical method of application, in terms of speed and volume of material used, is airless spray. In addition, spray applied PROMAPAINt® 60 offers a superb flat matt finish to the steelwork. Generally, the wet film thickness (WFT) of PROMAPAINt® 60 is such that a single coat is all that is necessary. Where for any reason over coating is required, this should only be carried out using PROMAPAINt® 60 itself, or an approved topseal (see page 10). Over coating can be carried out at any time, there is no maximum period between coats. As always, prior to applying any top coat, ensure the surface is dry, clean and sound, free of dirt and grease.

**Drying and overcoating times will vary with film thickness, temperature of atmosphere and steel, relative humidity (RH) and ventilation. Do not apply below 5°C.

***When water is added for thinning, the dry film thickness will be less than if applied without thinning and addition coatings may be necessary to achieve the correct dry film thickness (DFT).

For details of Hp/A, paint usage rates etc for both Australian and British Standard steel sections, refer to the colour coded pages here.

PROMAPAINt® 60
Australian Standard Steel Sections
PAGE 22-25

PROMAPAINt® 60
British Standard Steel Sections
PAGE 26-29

PROMAPAINT®-H

EXIT



PROMAPAIN[®] -H is a water borne intumescent coating for the fire protection of structural steelwork. The coating can be used for interior steel work without the addition of additional top coat. Exterior and semi exterior applications will require the addition of our waterborne acrylic topseal.

This product is particularly useful in areas where the application of solvent based products are perceived to be an environmental hazard. Examples of such areas would be hospitals and health care centres or in fact any buildings that are occupied or attached to occupied areas.

PROMAPAIN[®] -H will provide up to 90 minutes fire resistance to structural steel sections.

In the majority of applications, **PROMAPAIN[®] -H** can be applied in one coat giving reduced application costs.

For architectural finish it is possible for a skilled applicator to apply up to 1000 microns DFT with airless sprays providing several passes are used to build up the thickness. Thickness above this may result in product slump.

PROMAPAIN[®] -H has been especially formulated to provide economical solutions to the provision of fire protection for hollow sections. Although **PROMAPAIN[®] -H** can also be used for I-sections, it is generally more economical to use **PROMAPAIN[®] 60** for these applications (see previous page 7).

TECHNICAL PROPERTIES

Colour (basecoat)	Off white
Finish	Matt
Supply containers	25.4kg (20 litres)
Consistency in supplied form*	Can be spray applied
Flash point	Not applicable
IMDG – Code No.	NUL UN-No. Not classified
Specific gravity	1.27 ±0.1
Volume of solids	68 ±2%
Product weight	1.27kg per litre
Shelf life	15 months if stored below 30°C
Storage conditions	Store in dry, cool conditions and protect from frost
Fire resistance ratings (in accordance with the criteria of AS 1530: Part 4 and BS 476: Part 21)	From 15 up to 90 minutes
Theoretical film thickness	1mm wet (wft) = 1 litre per m ² = 0.7mm dry (dft) 1mm = 1000um (microns)
Drying times**	1500um (wft) at approx. 24 hours
Mixing ratio (with water)***	Maximum 5%

REQUIRED WET APPLICATION (Approximate figures only)

Example: Wet film thickness in mm equals litres per m² (i.e. 1.2lts/m² = 1.2mm or 1200um (microns)

Period	1 hour	90 minutes
Wet film thickness	2526um	5275um
Dry film thickness	1700um	3550um

*PROMAPAIN[®]-H can be applied in a number of ways. However, whilst brush or roller will provide a coating which will ensure the necessary Fire Resistance Level is achieved, aesthetically the finish is poor and application is slow. Therefore, the most economical method of application, in terms of speed and volume of material used, is airless spray. In addition, spray applied PROMAPAIN[®]-H offers a superb flat matt finish to the steelwork. Generally, the wet film thickness (WFT) of PROMAPAIN[®]-H is such that a single coat is all that is necessary. Where for any reason over coating is required, this should only be carried out using PROMAPAIN[®]-H itself, or an approved topseal (see page 10). Over coating can be carried out at any time, there is no maximum period between coats. As always, prior to applying any top coat, ensure the surface is dry, clean and sound, free of dirt and grease.

**Drying and overcoating times will vary with film thickness, temperature of atmosphere and steel, relative humidity (RH) and ventilation. Do not apply below 5°C.

***When water is added for thinning, the dry film thickness will be less than if applied without thinning and addition coatings may be necessary to achieve the correct dry film thickness (DFT).

For details of
Hp/A, paint
usage rates
etc for both
Australian
and British
Standard steel
sections, refer
to the colour
coded pages
here.

PROMAPAIN[®]-H
Australian Standard Steel Sections
PAGE 30-34

PROMAPAIN[®]-H
British Standard Steel Sections
PAGE 35-44

PROMAPAIN®-WBT





PROMAPAINt®-WBT is a waterborne acrylic topseal for applying over structural steelwork protected with **PROMAPAINt®** Intumescent Coating.

PROMAPAINt®-WBT can be supplied in BS4800 or RAL colours to ensure the fullest colour scheme possibilities for designers and architects.

PROMAPAINt®-WBT has excellent weathering and water resistance once fully dried, and can therefore be used in both internal and external applications, and can be applied over **PROMAPAINt® 60** and **PROMAPAINt®-H**.

PROMAPAINt®-WBT has a semigloss finish.

For solvent based acrylic or 2-pack solvent based Polyurethane top coating materials, please consult Promat.

TECHNICAL PROPERTIES

Colour (basecoat)	RAL or BS4800 colour available (See colour charts in this handbook)				
Finish	Semigloss				
Supply containers	23kg (20 litres)				
Consistency in supplied form*	Can be brush, roller or spray applied				
Flash point	Not applicable				
IMDG –Code No.	NUL UN-No. Not classified				
Specific gravity	1.15 ±0.1				
Volume of solids	41 ±2%				
Product weight	1.15kg per litre				
Shelf life	15 months if stored below 30°C				
Storage conditions	Store in dry, cool conditions and protect from frost				
Recommended DFT per coat	35 to 41um (microns)				
Theoretical coverage per coat	11.7 m²/litre at 35um				
Example: Drying times at 35um dft and RH70%		10°C	20°C		
Dust free		12 hours	4 hour		
Hard dry		48 hours	24 hours		
Overcoating	Minimum	48 hours	24 hours		
	Maximum	See below			
Thinning for dilution	Clean water				
Clean-up	Clean water				

APPLICATION RECOMMENDATION

Equipment	Volume of thinner	Nozzle size	Nozzle pressure
Airless spray	5 to 10%	0.46 to 0.53mm	2200psi
Air spray	10 to 15%	1.8 to 2.3mm	45 to 60psi
Brush or roller	5 to 10%	Not applicable	Not applicable

*Application by brush, roller is possible although airless spray is recommended for better finishes. Minimum time for overpainting is 2 painting hours. Over coating can be carried out at any time, there is no maximum period between coats. As always, prior to applying any top coat, ensure the surface is dry, clean and sound, free of dirt and grease.

Drying and overcoating times will vary with film thickness, temperature of atmosphere, relative humidity (RH) and ventilation. Do not apply below 5°C, maximum humidity 90%.

1. SPECIFICATION



Measurements are made in microns or mm.
(1000 microns = 1mm)

Wet film thickness equals approximately litres per m² (i.e. 1.2 litres per m² = 1200 microns or 1.2mm wet). Wet film gauges are available from Promat.

Spray application will vary depending upon the equipment used, the skill of the applicator and the size and shape of the steel sections.

If the product has to be thinned down to assist application, add no more than 5% by weight of clean, fresh water for PROMAPAIN[®] 60 and PROMAPAIN[®] -H. Always check for compatibility before use.

APPLICATION OF PROMAPAIN[®]

Steel members required to be fire resistant shall have PROMAPAIN[®] Intumescent Coating applied to the relevant thickness detailed in the Data Sheets, to achieve an Fire Resistance Level (xx/-/-) in accordance with AS 1530: Part 4 or BS 476: Part 21.

Preparation of the steel and coating application rate and methods shall be in accordance with the manufacturers printed instructions. All work to be certified by the applicator in an approved manner.



All primed surfaces must be clean, dry and free from dirt and grease etc. Mechanical damage must be made good with approved priming system before application proceeds. PROMAPAIN[®] must be applied in accordance with the manufactures instructions and care must be taken to ensure the specified dry film thickness is achieved.

STEEL PREPARATION

Steelwork must be prepared to Class 2 AS 1627 Part 2* and coated with a suitable primer within 4 hours of cleaning. A suitable primer includes red oxide primers.

*Equivalent Standards for steel preparation are Sa 2%o Swedish Standard SIS 05 09 00 or BS 7079: 1989. Primer thickness should not exceed 100microns/0.004inches/0.1mm.

HEALTH & SAFETY

PROMAPAIN[®] 60 and PROMAPAIN[®] -H are waterbourne products. and all normal precautions for applying such products must be taken. Health and Safety Data Sheets available on request.

For additional information contact your Promat office.

CLEAN-UP

Recommended thinner is clean, fresh water for PROMAPAIN[®] 60 and PROMAPAIN[®] -H.

PROMAPAIN[®]

2. PRIMERS

Prior to the application of PROMAPAIN[®] fire protection coatings for internal or external steel constructions, it is essential to apply an anti-corrosive primer. Steelwork must be prepared to Sa 2%o Swedish Standard SIS 05 09 00 or BS 7079: 1989 or Class 2: AS 1627: Part 2. and coated with a suitable primer within 4 hours of cleaning. All rust must be removed before the application of a primer.

Where steel structures have been previously primed with an unknown primer, it is most important that a compatibility and adhesion test is carried out to ensure that the primer will remain intact in a fire situation because the fire protection coatings rely on the primer for adhesion at all times. It is necessary therefore that the primer surface must provide excellent adhesion with the fire protection coatings and should not soften, flow or flake off in a fire. The primer must protect the steelwork from corrosion during storage, transport and erection prior to the application of the paint system.



Primer compatibility is controlled by a cross-cut test, sample coating with the PROMAPAIN[®] system and compatibility test*.

Unknown anti-corrosive primers and previously coated steelwork with thickness above 150um should be thoroughly tested for compatibility and adhesion in a fire.

Primer thickness should not exceed 100microns/ 0.004inches/0.1mm.

OUR RECOMMENDATION

For PROMAPAIN[®] fire protection coatings on steelwork we recommend particularly suitable primers:

FOR INTERNAL & EXTERNAL STEEL

Alkyd Zinc phosphate (fast dry and slow dry)

Epoxy zinc phosphate

Epoxy Wet Steel: Epoxy blast: Generally all two-pack systems will be acceptable.



FOR GALVANISED STEEL

Clean galvanised surfaces to ensure they are sufficiently dry, clean from oil, grease and other contaminants. Apply to previously prepared steelwork, a 2-pack micaceous iron oxide primer or a suitable primer/tiecoat.

Do not use Chlorinated rubber: Bitumen: Red lead and primers that are White Spirit based.

Where primed steel fabricated sections are exposed to prolonged weather or humid atmosphere the primers should be applied to a thickness of approximately 70 to 80um, paying particular attention to all edges of the steelwork.

IF IN DOUBT, PLEASE CONSULT PROMAT.

Any damage to primer surfaces should be treated as follows:

Thoroughly wire brush to remove loose flaking primer and all mill scale and reinstate original primer surface using a primer/tiecoat.

In the case of zinc rich epoxy primers, a two-pack epoxy micaceous iron oxide primer is recommended as a sealer coat/tie coat.

NOTE: That where a zinc rich primer has been exposed to external conditions for any significant period, the surface should be thoroughly washed down with fresh water using a stiff bristle brush, rinsed, allowed to dry fully prior to the application of the tie coat. This is to ensure removal of any zinc salts, which can interrupt intercoat adhesion.

COMPATIBILITY TEST

Apply approximately 400ml PROMAPAIN[®] fire protection coating to 0.25m² of the prepared surface and allow to dry for approx. 24 hours. Neither cracks, nor bubbles or wrinkles must be seen. Direct a flame on to the surface and edge zone of the specimen (e.g. with propane gas burner not cutting burner) until PROMAPAIN[®] has foamed up and/or clearly discoloured and the primer at the edge of the surface is charred and/or clearly discoloured. During this test period primers, old coatings and PROMAPAIN[®] must neither run nor flake off.

For Health & Safety information, the Material Safety Data Sheets are available from Promat upon request.

For additional information contact your Promat office.



2.1 PROMAPAIN[®] ANTICORROSION PRIMER

BASED ON HIGH QUALITY EPOXY ESTER RESIN

- Better adhesion to both steel and non ferrous coated steel, such as hot tip galvanised steel.
- No wash or etch primer required.
- Superior chemical and water resistance than ordinary alkyd based primers.

CONTAIN HIGH LEVEL OF ZINC PHOSPHATE ANTICORROSION PIGMENT

- Excellent corrosion resistance.
- Least toxic anticorrosive pigment known.
- No known health hazard.
- Safer for the environment.

QUICK DRYING

- Save time and cost.
- Can be over coated within 3 to 4 hours at 30°C.

BROAD RANGE OF TOP-COAT COMPATIBILITY

- Can accept wide variety of top-coats without softening or lifting.
- Better overall paint system performance.

2.2 PROMAPAIN[®] TIE-COAT

BASED ON URETHANE OIL MODIFIED ALKYD RESIN

- Can be applied with good adhesion directly to steel and galvanised steel.
- Better solvent and chemical resistance than conventional alkyd resin.
- Good impact and abrasion resistance.

CONTAIN HIGH LEVEL OF ZINC PHOSPHATE ANTICORROSION PIGMENT

- Excellent anticorrosion properties.
- Least toxic anticorrosive pigment known.
- Health and environmentally friendly.
- Helps to upgrade the anticorrosion protection of the existing alkyd based anticorrosive primer.

WHITE SPIRIT THINNABLE

Will not attack, soften or lift the existing coatings.

QUICK DRYING, DRY TO HARD & TOUGH FILM

- Save time and cost effective.
- Can be finished with a wide variety of top coatings.
- Excellent as sealer or tie-coat for generic crossover particularly from existing alkyd based primer or coatings.

3. GENERAL RECOMMENDATION FOR AIRLESS INTUMESCENT COATINGS

PROMAPAIN[®] can be applied by airless spraying method if the following application proposals are taken into consideration.

SUITABLE EQUIPMENT

Airless spray equipment with a minimum output fluid pressure of 3000psi is recommended with a spray gun tip size of 21 thou to 25 thou.

It may be possible to use smaller equipment, however this could lead to clogging and excess wear and tear on the equipment.

ANCILLARY EQUIPMENT

It may be necessary for screens and filters to be removed and hose diameters below 3/8 inch may restrict flows. Length of hose depends upon the equipment; up to approximately 40m.

For ease of handling we recommend a swivel between the hose and spray gun.

It is practical to equip the spray gun with a reversing nozzle.

Spray angle according to steel construction and profile.

AIRLESS SPRAYING

Pay attention to the directions of use for the spray equipment. If the appearance of the spray surface is not satisfactory the material may be thinned up to 5% by weight. Check for compatibility before use.

BUILD-UP OF COATING THICKNESS

With airless spraying the surface is smoother than with conventional spraying. That is the reason why average film thickness with airless spraying can be up to 10% less.

For architectural finish it is possible for a skilled applicator to apply up to 1000 microns DFT with airless sprays providing several passes are used to build up the thickness. Thickness above this may result in product slump. (Up to approx. 1500 micron DFT thickness is achievable.)

Measure the thickness of each coat with a wet film gauge if more than one coat is required and record measurements and to ensure the correct thickness is applied and a record of kept.

TOP COAT

This is not required for internal use unless a decorative coat is specified.

All airless spray equipment is suitable. No modifications have to be made to the equipment. Follow the equipment manufacturers instructions.

4. APPROXIMATE NUMBER OF COATS TO ACHIEVE DRY FILM THICKNESS (DFT) IN MM

Usage rates are approximate and will vary dependant upon the section, the environment, the applicator, the method of application and the equipment used.

NOTE: 1 litre of coating will give a wet film thickness of 1.0mm or 1000um per m².

E.g. Loading at 0.6 litre/m² = Wet Film Thickness (WFT) Coat of 0.6mm wet

PROMAPAIN[®] 60

Number of coats	Interior brush (mm)		Interior spray (mm)		Exterior brush (mm)		Exterior spray (mm)	
	DFT	WFT	DFT	WFT	DFT	WFT	DFT	WFT
1	to 0.6	to 0.8	to 1.6	to 2.3	to 0.5	to 0.7	to 1.5	to 2.1
2	to 1.0	to 1.4	NA	NA	to 1.0	to 1.4	to 3.0	to 4.3
3	to 1.6	to 2.3	NA	NA	to 1.6	to 2.3	NA	NA

NA = Not applicable

PROMAPAIN[®]-H

Number of coats	Interior brush (mm)		Interior spray (mm)		Exterior brush (mm)		Exterior spray (mm)	
	DFT	WFT	DFT	WFT	DFT	WFT	DFT	WFT
1	to 0.6	to 0.8	to 1.6	to 2.3	to 0.5	to 0.7	to 1.5	to 2.1
2	to 1.0	to 1.4	NA	NA	to 1.0	to 1.4	to 3.0	to 4.3
3	to 1.6	to 2.3	NA	NA	to 1.6	to 2.3	NA	NA

NA = Not applicable

Please note these loadings are approximate and will vary depending on temperature of steel, air and coating and whether it is applied to horizontal or vertical steel sections. There will also be small differences in the viscosity from batch to batch.

Loading per coat may have to be reduced if runs occur and an architectural finish is required.

Loadings per coat may be increased if runs are not an issue as long as minimum thickness is maintained on the overall coating.



5. PROMAPAIN[®] TOPSEAL

5.1 PROMAPAIN[®]-WBT WATERBORNE TOPSEAL

WATERBORNE

- Lower odour.
- Health and environment friendly.

BASED ON ACRYLIC BINDER WITH WET ADHESION PROMOTER TECHNOLOGY

Excellent adhesion to both waterborne and solventborne base-coat.

HIGH TG BINDER

(SPECIALLY SELECTED FOR WARMER CLIMATIC CONDITION)

- Good film hardness.
- Excellent abrasion resistance.
- No surface tack.
- Low dirt pick up and retention.

PURE ACRYLIC

- Excellent UV resistance.
- Colour and gloss retention.
- Water and weathering resistant.

BEST AVAILABLE FILM PRESERVATIVE INCORPORATED

Excellent, fungus, mildew and algae growth resistance. This is very important for tropical climate.

5.2 PROMAPAIN[®]-SBT SOLVENT-BASED ACRYLIC TOPSEAL

MINERAL SPIRIT THINNABLE

- Much less odour than other solvent-based acrylic paint.
- No attack and lifting of base-coat.
- Better intercoat adhesion.

PURE ACRYLIC

- Superior gloss and colour retention than alkyd-based paint.
- Superior alkaline resistance.
- Superior water and UV resistance.
- Practically non chalking.

HIGH TG RESIN

- Good film hardness.
- Better blocking resistance.
- Low dirt pick up and retention.
- Better abrasion resistance.

5.3 PROMAPAIN[®]-APT 2-PACK SOLVENT-BORNE ACRYLIC/POLYURETHANE TOPSEAL

BASED ON ACRYLIC POLYOL WITH MEDIUM HIGH OH VALUE

More polyisocyanate for crosslinking which yield paint with:

- Better film hardness
- Better chemical resistance
- Better UV resistance
- Better abrasion resistance

CONTAINS NO EXTENDER RESIN

- Practically non yellowing.
- Practically non chalking.
- Excellent gloss and colour retention.

HIGH TG ACRYLIC POLYOL (SPECIALLY SELECTED FOR WARMER CLIMATE)

- Low dirt pick and retention.
- Superior abrasion resistance.

5.4 COLOUR SELECTIONS

These colour selections have been included to give you an indication of the wide choice of colours available. In addition special colours can be mixed to your specification.

Due to the limitations of colour printing it is advisable to check your selected colour with the official RAL or BS4800 colour chart prior to ordering. DUE TO THE LIMITATIONS OF COLOUR PRINTING, THE COLOURS DEPICTED HERE MAY DIFFER SLIGHTLY FROM THE ACTUAL PAINT FINISH.

SCOPE OF USE

High build single pack topcoat material, Special top coat for PROMAPAIN[®] intumescent fire protection systems for outdoor use.

TECHNICAL PROPERTIES

Finish	Semigloss
Supply containers	22kg (20 litres)
Consistency in supplied form*	Can be brushed, roller or spray applied
Flash point	Not applicable
IMDG – Code No.	NUL UN-No. Not classified
Density	Approx. 1.24 kg/m ² according to DIN 53217
Specific gravity	1.15
Volume of solids	41 ±2%
Product weight	1.15kg per litre
Shelf life	15 months if stored below 30°C
Storage conditions	Store in dry, cool conditions and protect from frost
Recommended DFT per coat	35 to 41um (microns)
Theoretical coverage per coat	11.7 litre/m ² at 35um
Thinning for dilution	Clean water
Clean-up	Clean water

*Application by brush, roller is possible although airless spray is recommended for better finishes. Minimum time for overcoating is 2 hours. Over coating can be carried out at any time, there is no maximum period between coats. As always, prior to applying any top coat, ensure the surface is dry, clean and sound, free of dirt and grease.

Drying and overcoating times will vary with film thickness, temperature of atmosphere, relative humidity (RH) and ventilation. Do not apply below 5°C, maximum humidity 90%.





■ RAL colour range ● BS 4800 colour range

18



■ RAL colour range ● BS 4800 colour range

6. CALCULATIONS OF HP/A VALUES

The degree of fire protection depends on the Hp/A section factor for the steel section. The Hp/A factor is a function of the area of the steel exposed to the fire and the mass of the steel section. The higher the Hp/A, the faster the steel section heats up, and so the greater the thickness of fire protection material required.

PROFILE PROTECTION

In the case of profile protection, Hp is the sum of the dimensions of the steel surfaces that are to be coated as shown below.

Where a steel section abuts, or is built into a fire resisting wall or floor, the surface in contact with, or the surface within the wall or floor, is ignored when calculating HP.

However, the value A is always the total cross-sectional area of the steel section.

Encasements following the profile of the steel section will generally have a higher Hp/A section factor than a box encasement.

The serial size and mass per metre of most steel sections are available in tables from steel manufacturers, which also give Hp/A values calculated for 3 or 4-sided box protection.

Further tables are given in the ASFP Publication Fire Protection of Structural Steel (the Yellow Book). The Promat Technical Department is pleased to calculate Hp/A section factors and required coating thicknesses on request, should they not be included in the tables in the following pages of this handbook.

EXAMPLE 1 This shows how to calculate Hp/A for the steelworks as would be required for a paint protection system steel beam, serial size 406mm x 178mm x 54kg/m to be exposed on three sides.

Serial size = 406mm x 178mm

Actual size = 406.2mm x 177.6mm
flange 10.9mm, web 7.6mm

Continued on the right column

$$Hp = 2D = 406.2 + 406.2$$

$$3B = 177.6 \times 2 \text{ (inside and outside bottom flange)} \\ + 177.6\text{mm (inside top flange)}$$

$$\therefore 406.2 + 406.2 + 177.6 + 177.6 + 177.6 \\ = 1345.2\text{mm} = 1.3452\text{m}$$

$$A = 68.4\text{cm}^2 (0.0068\text{m}^2)$$

$$Hp/A = \frac{1.338}{0.0068} = 198.85 \therefore Hp/A = 199\text{m}^{-1}$$

The value of A, the cross-sectional area, can be obtained from steelwork tables, or by accurate measurement. However, if the mass per linear metre of the steel section is known, then the Hp/A value can be calculated as below:

$$\frac{Hp}{A} = \frac{7850 \times Hp}{W}$$

Where W = Mass per metre of the steel section in kg

Where 7850 = Nominal density of steel

EXAMPLE 2 Steel beam 406mm x 178mm x 54kg/m to be exposed on three sides.

Serial size = 406mm x 178mm

Actual size = 402.6mm x 177.6mm

$$Hp = 2D = 406.2 + 406.2$$

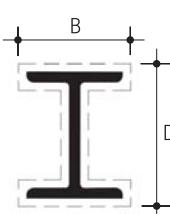
$$3B = 177.6 \times 2 \text{ (inside and outside bottom flange)} \\ + 177.6\text{mm (inside top flange)}$$

$$\therefore 406.2 + 406.2 + 177.6 + 177.6 + 177.6 \\ = 1345.2\text{mm} = 1.3452\text{m}$$

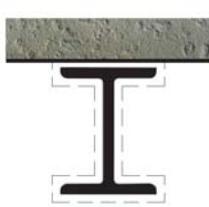
$$Hp/A = \frac{7850 \times 1.3452}{54} = 195.55 = 196\text{m}^{-1}$$

As will be noted, there is a marginal difference in the results between the two methods. Once the Hp/A value has been determined, the required dry film thickness (DFT) can be obtained from the relevant tables on following pages.

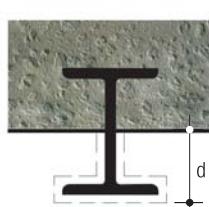
BASED-ON FIGURES FOR UNIVERSAL BEAMS, UNIVERSAL COLUMNS, RSJ & OTHER SECTIONS



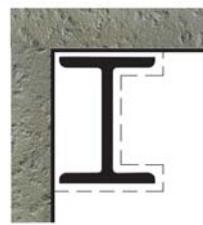
4 sides



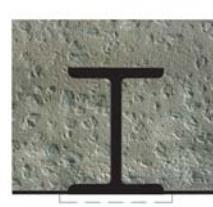
3 sides



3 sides



2 sides



1 side

$$Hp = 4B + 2D$$

$$Hp = 3B + 2D$$

$$Hp = 2B + 2d$$

$$Hp = 2B + D$$

$$B$$

NOTE: For partially exposed members, the A value is still the total cross sectional area of the section being protected.

For ease of reference, please use colour coded page tabs depicted here as a guide for the charts of Australian and British calculations of Hp/A values for both PROMAPAIN[®] 60 and PROMAPAIN[®]-H Intumescent Coatings.



PROMAPAIN[®] 60
Australian Standard Steel Sections
PAGE 22-25

PROMAPAIN[®] 60
British Standard Steel Sections
PAGE 26-29



PROMAPAIN[®] -H
Australian Standard Steel Sections
PAGE 30-34

PROMAPAIN[®] -H
British Standard Steel Sections
PAGE 38-44

R PROMAPAIN

6.1 PROMAPAIN[®] 60: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED UNIVERSAL BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
610UB125	125.0	120	0.55	0.55	2.51	NA	134	0.61	0.76	4.16	NA
610UB113	113.0	132	0.54	0.54	3.04	NA	148	0.61	1.06	NA	NA
610UB101	101.0	147	0.54	0.62	3.42	NA	164	0.60	1.36	NA	NA
530UB92	92.4	144	0.48	0.56	2.95	NA	162	0.54	1.22	NA	NA
530UB82	82.0	161	0.48	0.75	NA	NA	181	0.59	1.51	NA	NA
460UB82	82.1	143	0.43	0.49	2.61	NA	161	0.48	1.08	NA	NA
460UB74	74.6	156	0.42	0.62	2.97	NA	176	0.50	1.32	NA	NA
460UB67	67.1	173	0.42	0.74	NA	NA	195	0.52	1.41	NA	NA
410UB60	59.7	177	0.38	0.71	NA	NA	200	0.50	1.31	NA	NA
410UB54	53.7	196	0.38	0.82	NA	NA	222	0.52	1.47	NA	NA
360UB57	57.0	170	0.35	0.58	NA	NA	194	0.44	1.19	NA	NA
360UB51	50.7	190	0.35	0.68	NA	NA	216	0.48	1.32	NA	NA
360UB45	44.7	214	0.37	0.85	NA	NA	244	0.50	1.51	NA	NA
310UB46	46.2	189	0.32	0.62	NA	NA	217	0.44	1.20	NA	NA
310UB40	40.4	214	0.33	0.77	NA	NA	246	0.47	1.45	NA	NA
310UB32	32.0	256	0.36	0.92	NA	NA	292	0.48	1.98	NA	NA
250UB37	37.3	200	0.27	0.58	NA	NA	231	0.39	1.10	NA	NA
250UB31	31.4	235	0.30	0.75	NA	NA	272	0.42	1.55	NA	NA
250UB25	25.7	265	0.30	0.78	NA	NA	303	0.38	1.63	NA	NA
200UB30	29.8	215	0.24	0.57	NA	NA	250	0.35	1.08	NA	NA
200UB25	25.4	249	0.27	0.69	NA	NA	291	0.38	1.56	NA	NA
200UB22	22.3	283	0.30	0.78	NA	NA	329	0.40	NA	NA	NA
200UB18	18.2	299	0.27	0.71	NA	NA	342	NA	NA	NA	NA
180UB22	22.2	222	0.19	0.48	NA	NA	254	0.27	0.86	NA	NA
180UB18	18.1	269	0.24	0.58	NA	NA	308	0.29	1.30	NA	NA
180UB16	16.1	300	0.24	0.63	NA	NA	344	NA	NA	NA	NA
150UB18	18.0	233	0.17	0.43	NA	NA	266	0.24	0.84	NA	NA
150UB14	14.0	294	0.20	0.53	NA	NA	336	NA	NA	NA	NA

4-SIDED UNIVERSAL COLUMNS: CRITICAL TEMP. 462°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
310UC158	158.0	94	0.54	1.57	NA	NA
310UC137	137.0	107	0.54	1.66	NA	NA
310UC118	118.0	123	0.56	1.80	NA	NA
310UC97	96.8	149	0.63	2.05	NA	NA
250UC89	89.5	135	0.49	1.59	NA	NA
250UC73	72.9	164	0.57	1.79	NA	NA
200UC60	59.5	164	0.46	1.45	NA	NA
200UC52	52.2	185	0.49	1.65	NA	NA
200UC46	46.2	207	0.52	1.95	NA	NA
152UC37	37.2	199	0.39	1.43	NA	NA
152UC30	30.0	242	0.45	1.80	NA	NA
152UC23	23.4	307	0.54	NA	NA	NA
100UC15	14.8	313	0.35	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.1 PROMAPAIN® 60: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED PARALLEL FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 1

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	A + 4B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
380	55.20	151	0.30	0.41	2.00	NA	111	0.22	0.22	0.97	NA
300	40.10	170	0.25	0.41	NA	NA	129	0.19	0.19	1.01	NA
250	35.30	171	0.22	0.39	NA	NA	136	0.17	0.18	1.02	NA
230	25.10	214	0.21	0.48	NA	NA	166	0.15	0.25	NA	NA
200	22.90	214	0.19	0.44	NA	NA	171	0.14	0.25	NA	NA
180	20.90	220	0.18	0.43	NA	NA	180	0.14	0.25	NA	NA
150	17.70	233	0.17	0.42	NA	NA	200	0.13	0.28	NA	NA
125	11.90	294	0.17	0.45	NA	NA	254	0.13	0.34	NA	NA
100	8.33	330	0.15	0.54	NA	NA	283	0.11	0.29	NA	NA
75	5.92	358	NA	NA	NA	NA	312	0.09	0.29	NA	NA



TYPE 1



TYPE 2



TYPE 3

3-SIDED PARALLEL FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 3

Section	Weight/M	A + 2B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	2A + 4B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
380	55.20	82	0.17	0.17	0.60	NA	165	0.33	0.75	NA	NA
300	40.10	94	0.14	0.14	0.49	NA	188	0.30	0.80	NA	NA
250	35.30	96	0.12	0.12	0.44	NA	191	0.27	0.73	NA	NA
230	25.10	119	0.11	0.11	0.50	NA	238	0.27	0.78	NA	NA
200	22.90	120	0.10	0.10	0.46	NA	240	0.25	0.72	NA	NA
180	20.90	124	0.09	0.09	0.48	NA	248	0.25	0.75	NA	NA
150	17.70	133	0.09	0.09	0.48	NA	266	0.23	0.82	NA	NA
125	11.90	168	0.07	0.12	NA	NA	336	NA	NA	NA	NA
100	8.33	188	0.06	0.11	NA	NA	377	NA	NA	NA	NA
75	5.92	206	0.04	0.10	NA	NA	411	NA	NA	NA	NA

4-SIDED PARALLEL CHANNELS: CRITICAL TEMP. 550°C

6.1 PROMAPAIN[®] 60: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED WELDED BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
1200WB455	455.0	67	1.11	1.11	4.01	NA	76	1.26	1.26	6.04	NA
1200WB423	423.0	72	1.11	1.11	4.00	NA	81	1.25	1.25	6.20	NA
1200WB392	392.0	77	1.11	1.11	3.98	NA	87	1.25	1.25	6.37	NA
1200WB342	342.0	82	1.02	1.02	3.67	NA	91	1.13	1.13	5.95	NA
1200WB317	317.0	88	1.02	1.02	3.65	NA	98	1.13	1.13	6.10	NA
1200WB278	278.0	96	0.97	0.97	3.49	NA	106	1.07	1.07	6.25	NA
1200WB249	249.0	100	0.90	0.90	3.26	NA	108	0.98	0.98	5.75	NA
1000WB322	322.0	79	0.93	0.93	3.34	NA	89	1.04	1.04	5.32	NA
1000WB296	296.0	86	0.92	0.92	3.33	NA	96	1.04	1.04	5.61	NA
1000WB258	258.0	93	0.88	0.88	3.16	NA	104	0.98	0.98	5.57	NA
1000WB215	215.0	106	0.83	0.83	3.40	NA	117	0.91	0.91	5.62	NA
900WB282	282.0	85	0.87	0.87	3.14	NA	96	0.99	0.99	5.32	NA
900WB257	257.0	93	0.87	0.87	3.12	NA	105	0.98	0.98	5.59	NA
900WB218	218.0	103	0.82	0.82	3.16	NA	116	0.92	0.92	5.66	NA
900WB175	175.0	121	0.77	0.77	3.94	NA	135	0.86	1.07	5.66	NA
800WB192	192.0	104	0.72	0.72	2.79	NA	116	0.81	0.81	4.98	NA
800WB168	168.0	114	0.70	0.70	3.04	NA	127	0.78	0.78	5.01	NA
800WB146	146.0	130	0.69	0.69	3.71	NA	145	0.77	1.20	5.40	NA
800WB122	122.0	150	0.67	0.83	4.24	NA	166	0.78	1.77	NA	NA
700WB173	173.0	102	0.65	0.65	2.48	NA	115	0.72	0.72	4.34	NA
700WB150	150.0	114	0.62	0.62	2.70	NA	127	0.69	0.69	4.46	NA
700WB130	130.0	130	0.61	0.61	3.29	NA	145	0.69	1.06	4.80	NA
700WB115	115.0	146	0.61	0.76	3.87	NA	163	0.68	1.53	NA	NA

4-SIDED WELDED COLUMNS: CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
500WC440	440.0	53	0.85	2.20	NA	NA
500WC414	414.0	56	0.85	2.20	NA	NA
500WC383	383.0	60	0.84	2.19	NA	NA
500WC340	340.0	70	0.87	2.25	NA	NA
500WC290	290.0	82	0.86	2.32	NA	NA
500WC267	267.0	88	0.86	2.40	NA	NA
500WC228	228.0	103	0.85	2.64	NA	NA
400WC361	361.0	53	0.70	1.83	NA	NA
400WC328	328.0	59	0.70	1.83	NA	NA
400WC303	303.0	63	0.70	1.82	NA	NA
400WC270	270.0	71	0.69	1.80	NA	NA
400WC212	212.0	89	0.69	1.92	NA	NA
400WC181	181.0	103	0.68	2.11	NA	NA
400WC144	144.0	129	0.74	2.36	NA	NA
350WC280	280.0	59	0.60	1.57	NA	NA
350WC258	258.0	64	0.60	1.56	NA	NA
350WC230	230.0	71	0.59	1.54	NA	NA
350WC197	197.0	82	0.59	1.59	NA	NA

3-SIDED TAPER FLANGE BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
125 TFB	13.1	267	0.16	0.41	NA	NA	306	0.21	0.93	NA	NA
100 TFB	7.2	365	NA	NA	NA	NA	414	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.1 PROMAPAIN® 60: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED EQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M		Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
200 x 200 x 26	76.80	61	0.17	0.17	0.62	NA		82	0.23	0.23	1.13	NA
200 x 200 x 20	60.10	78	0.17	0.17	0.62	NA		104	0.23	0.23	1.30	NA
200 x 200 x 18	54.40	87	0.17	0.17	0.62	NA		115	0.23	0.23	1.37	NA
200 x 200 x 16	48.70	97	0.17	0.17	0.62	NA		129	0.23	0.23	1.47	NA
200 x 200 x 13	40.00	118	0.17	0.17	0.79	NA		157	0.23	0.47	NA	NA
150 x 150 x 19	42.10	84	0.13	0.13	0.46	NA		112	0.17	0.17	1.03	NA
150 x 150 x 16	35.40	100	0.13	0.13	0.46	NA		133	0.17	0.21	1.13	NA
150 x 150 x 12	27.30	129	0.13	0.13	0.69	NA		173	0.18	0.44	NA	NA
150 x 150 x 10	21.90	161	0.13	0.20	NA	NA		215	0.21	0.56	NA	NA
125 x 125 x 16	29.10	101	0.11	0.11	0.41	NA		135	0.14	0.18	0.94	NA
125 x 125 x 12	22.50	131	0.11	0.11	0.60	NA		174	0.15	0.36	NA	NA
125 x 125 x 10	18.00	164	0.11	0.17	NA	NA		218	0.17	0.47	NA	NA
125 x 125 x 8	14.90	198	0.11	0.23	NA	NA		263	0.19	0.66	NA	NA
100 x 100 x 12	17.70	133	0.09	0.09	0.48	NA		177	0.12	0.31	NA	NA
100 x 100 x 10	14.20	166	0.09	0.14	NA	NA		221	0.14	0.39	NA	NA
100 x 100 x 8	11.80	200	0.09	0.18	NA	NA		266	0.15	0.55	NA	NA
100 x 100 x 6	9.16	257	0.10	0.27	NA	NA		343	NA	NA	NA	NA
90 x 90 x 10	12.70	167	0.08	0.13	NA	NA		223	0.12	0.35	NA	NA
90 x 90 x 8	10.60	200	0.08	0.17	NA	NA		267	0.14	0.49	NA	NA
90 x 90 x 6	8.22	258	0.09	0.24	NA	NA		344	NA	NA	NA	NA
75 x 75 x 10	10.50	168	0.06	0.11	NA	NA		224	0.10	0.29	NA	NA
75 x 75 x 8	8.73	202	0.06	0.14	NA	NA		270	0.12	0.41	NA	NA
75 x 75 x 6	6.81	259	0.08	0.20	NA	NA		346	NA	NA	NA	NA
75 x 75 x 5	5.27	335	NA	NA	NA	NA		447	NA	NA	NA	NA
65 x 65 x 10	9.02	170	0.06	0.09	NA	NA		226	0.09	0.26	NA	NA
65 x 65 x 8	7.51	204	0.06	0.13	NA	NA		272	0.10	0.37	NA	NA
65 x 65 x 6	5.87	261	0.07	0.18	NA	NA		348	NA	NA	NA	NA
65 x 65 x 5	4.56	336	NA	NA	NA	NA		448	NA	NA	NA	NA
55 x 55 x 6	4.93	263	0.06	0.15	NA	NA		350	NA	NA	NA	NA
55 x 55 x 5	3.84	337	NA	NA	NA	NA		450	NA	NA	NA	NA
50 x 50 x 8	5.68	207	0.04	0.10	NA	NA		276	0.08	0.30	NA	NA
50 x 50 x 6	4.46	264	0.05	0.14	NA	NA		352	NA	NA	NA	NA
50 x 50 x 5	3.48	338	NA	NA	NA	NA		451	NA	NA	NA	NA
45 x 45 x 6	3.97	267	0.05	0.13	NA	NA		356	NA	NA	NA	NA
45 x 45 x 5	3.10	342	NA	NA	NA	NA		456	NA	NA	NA	NA
40 x 40 x 6	3.50	269	0.04	0.11	NA	NA		359	NA	NA	NA	NA
40 x 40 x 5	2.73	345	NA	NA	NA	NA		460	NA	NA	NA	NA
30 x 30 x 6	2.56	276	0.03	0.09	NA	NA		368	NA	NA	NA	NA
30 x 30 x 5	2.01	351	NA	NA	NA	NA		469	NA	NA	NA	NA
25 x 25 x 6	2.08	283	0.03	0.07	NA	NA		377	NA	NA	NA	NA
25 x 25 x 5	1.65	357	NA	NA	NA	NA		476	NA	NA	NA	NA

3-SIDED UNEQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M		Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
150 x 100 x 12	22.50	140	0.11	0.12	0.67	NA		174	0.15	0.36	NA	NA
150 x 100 x 10	18.00	174	0.11	0.20	NA	NA		218	0.17	0.47	NA	NA
150 x 90 x 16	27.90	110	0.11	0.11	0.46	NA		135	0.14	0.17	NA	NA
150 x 90 x 12	21.60	142	0.11	0.13	0.68	NA		174	0.14	0.35	NA	NA
150 x 90 x 10	17.30	177	0.11	0.21	NA	NA		218	0.16	0.45	NA	NA
150 x 90 x 8	14.30	214	0.12	0.27	NA	NA		263	0.19	0.63	NA	NA
125 x 75 x 12	17.70	144	0.09	0.11	0.84	NA		177	0.12	0.31	NA	NA
125 x 75 x 10	14.20	180	0.09	0.17	NA	NA		221	0.14	0.39	NA	NA
125 x 75 x 8	11.80	216	0.10	0.24	NA	NA		266	0.15	0.55	NA	NA
125 x 75 x 6	9.16	279	0.12	0.31	NA	NA		343	NA	NA	NA	NA
100 x 75 x 10	12.40	174	0.08	0.14	NA	NA		222	0.12	0.34	NA	NA
100 x 75 x 8	10.30	210	0.08	0.18	NA	NA		267	0.14	0.48	NA	NA
100 x 75 x 6	7.98	271	0.10	0.26	NA	NA		344	NA	NA	NA	NA
75 x 50 x 8	7.23	217	0.06	0.15	NA	NA		271	0.10	0.36	NA	NA
75 x 50 x 6	5.66	277	0.07	0.19	NA	NA		347	NA	NA	NA	NA
75 x 50 x 5	4.40	357	NA	NA	NA	NA		446	NA	NA	NA	NA
65 x 50 x 8	6.59	214	0.05	0.13	NA	NA		274	0.09	0.33	NA	NA
65 x 50 x 6	5.16	274	0.06	0.17	NA	NA		350	NA	NA	NA	NA
65 x 50 x 5	4.02	351	NA	NA	NA	NA		449	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.
Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.2 PROMAPAIN® 60: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED UNIVERSAL BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
914 x 419	388	63	0.89	0.89	3.19	NA
914 x 419	343	70	0.88	0.88	3.17	NA
914 x 305	289	75	0.79	0.79	2.86	NA
914 x 305	253	85	0.79	0.79	2.83	NA
914 x 305	224	96	0.78	0.78	2.81	NA
914 x 305	201	106	0.78	0.78	3.18	NA
838 x 292	226	90	0.74	0.74	2.66	NA
838 x 292	194	104	0.73	0.73	2.82	NA
838 x 292	176	113	0.73	0.73	3.16	NA
762 x 267	197	93	0.67	0.67	2.41	NA
762 x 267	173	105	0.66	0.66	2.56	NA
762 x 267	147	123	0.66	0.66	3.36	NA
686 x 254	170	99	0.62	0.62	2.22	NA
686 x 254	152	110	0.61	0.61	2.51	NA
686 x 254	140	119	0.61	0.61	2.80	NA
686 x 254	125	133	0.60	0.60	3.38	NA
610 x 305	238	73	0.63	0.63	2.26	NA
610 x 305	179	95	0.62	0.62	2.22	NA
610 x 305	149	112	0.61	0.61	2.65	NA
610 x 229	140	108	0.55	0.55	2.25	NA
610 x 229	125	120	0.55	0.55	2.51	NA
610 x 229	113	132	0.54	0.54	3.04	NA
610 x 229	101	147	0.54	0.62	3.42	NA
533 x 210	122	111	0.49	0.49	2.14	NA
533 x 210	109	123	0.49	0.49	2.49	NA
533 x 210	101	132	0.49	0.49	2.73	NA
533 x 210	92	145	0.48	0.51	2.95	NA
533 x 210	82	161	0.48	0.70	NA	NA
457 x 191	98	121	0.43	0.43	2.21	NA
457 x 191	89	133	0.43	0.43	2.41	NA
457 x 191	82	143	0.43	0.45	2.61	NA
457 x 191	74	158	0.42	0.57	2.97	NA
457 x 191	67	173	0.42	0.70	NA	NA
457 x 152	82	133	0.40	0.40	2.23	NA
457 x 152	74	146	0.39	0.45	2.51	NA
457 x 152	67	161	0.39	0.57	NA	NA
457 x 152	60	179	0.39	0.68	NA	NA
457 x 152	52	205	0.39	0.87	NA	NA
406 x 178	74	145	0.39	0.41	2.38	NA
406 x 178	67	159	0.39	0.52	2.71	NA
406 x 178	60	176	0.38	0.67	NA	NA
406 x 178	54	195	0.38	0.78	NA	NA
406 x 140	46	210	0.35	0.83	NA	NA
406 x 140	39	246	0.40	1.05	NA	NA
356 x 171	67	146	0.36	0.41	2.26	NA
356 x 171	57	170	0.35	0.55	NA	NA
356 x 171	51	189	0.35	0.68	NA	NA
356 x 171	45	212	0.37	0.85	NA	NA
356 x 127	39	218	0.33	0.79	NA	NA
356 x 127	33	255	0.35	0.94	NA	NA
305 x 165	54	163	0.32	0.47	NA	NA
305 x 165	46	190	0.32	0.62	NA	NA
305 x 165	40	216	0.33	0.80	NA	NA
305 x 127	48	163	0.28	0.41	NA	NA
305 x 127	42	184	0.28	0.52	NA	NA
305 x 127	37	208	0.28	0.66	NA	NA
305 x 102	33	222	0.28	0.71	NA	NA
305 x 102	28	259	0.32	0.82	NA	NA
305 x 102	25	287	0.34	0.90	NA	NA
254 x 146	43	175	0.27	0.45	NA	NA
254 x 146	37	202	0.27	0.61	NA	NA
254 x 146	31	238	0.30	0.77	NA	NA
254 x 102	28	232	0.26	0.66	NA	NA
254 x 102	25	257	0.28	0.73	NA	NA
254 x 102	22	290	0.30	0.80	NA	NA
203 x 133	30	213	0.24	0.57	NA	NA
203 x 133	25	253	0.27	0.70	NA	NA
203 x 102	23	243	0.23	0.59	NA	NA
178 x 102	19	273	0.24	0.62	NA	NA
152 x 89	16	280	0.20	0.55	NA	NA
127 x 76	13	291	0.18	0.49	NA	NA

4-SIDED UNIVERSAL BEAMS: CRITICAL TEMP. 550°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
914 x 419	388	71	1.01	1.01	4.68	NA
914 x 419	343	80	1.00	1.00	4.80	NA
914 x 305	289	84	0.88	0.88	4.36	NA
914 x 305	253	95	0.87	0.87	4.59	NA
914 x 305	224	106	0.87	0.87	5.08	NA
914 x 305	201	118	0.86	0.86	5.31	NA
838 x 292	226	100	0.82	0.82	4.44	NA
838 x 292	194	115	0.81	0.81	4.89	NA
838 x 292	176	127	0.81	0.81	5.23	NA
762 x 267	197	104	0.75	0.75	4.25	NA
762 x 267	173	118	0.74	0.74	4.55	NA
762 x 267	147	137	0.73	1.03	4.96	NA
686 x 254	170	111	0.69	0.69	4.13	NA
686 x 254	152	124	0.68	0.68	4.31	NA
686 x 254	140	134	0.68	0.85	4.49	NA
686 x 254	125	149	0.68	1.18	NA	NA
610 x 305	238	83	0.72	0.72	3.55	NA
610 x 305	179	108	0.70	0.70	4.12	NA
610 x 305	149	128	0.70	0.70	4.49	NA
610 x 229	140	121	0.62	0.62	3.88	NA
610 x 229	125	134	0.61	0.76	4.04	NA
610 x 229	113	148	0.61	1.06	NA	NA
610 x 229	101	164	0.60	1.36	NA	NA
533 x 210	122	125	0.55	0.55	3.49	NA
533 x 210	109	138	0.55	0.77	3.71	NA
533 x 210	101	149	0.55	0.96	NA	NA
533 x 210	92	162	0.54	1.22	NA	NA
533 x 210	82	181	0.59	1.51	NA	NA
457 x 191	98	137	0.49	0.68	3.29	NA
457 x 191	89	150	0.48	0.85	NA	NA
457 x 191	82	161	0.48	1.08	NA	NA
457 x 191	74	178	0.50	1.32	NA	NA
457 x 191	67	195	0.52	1.41	NA	NA
457 x 152	82	148	0.44	0.77	NA	NA
457 x 152	74	163	0.44	0.99	NA	NA
457 x 152	67	178	0.46	1.20	NA	NA
457 x 152	60	199	0.50	1.30	NA	NA
457 x 152	52	228	0.52	1.49	NA	NA
406 x 178	74	164	0.44	0.99	NA	NA
406 x 178	67	180	0.46	1.21	NA	NA
406 x 178	60	199	0.50	1.31	NA	NA
406 x 178	54	220	0.52	1.43	NA	NA
406 x 140	46	235	0.49	1.37	NA	NA
406 x 140	39	274	0.53	1.95	NA	NA
356 x 171	67	166	0.43	0.97	NA	NA
356 x 171	57	194	0.44	1.19	NA	NA
356 x 171	51	215	0.48	1.30	NA	NA
356 x 171	45	242	0.50	1.51	NA	NA
356 x 127	39	243	0.43	1.31	NA	NA
356 x 127	33	285	0.48	1.85	NA	NA
305 x 165	54	187	0.41	1.07	NA	NA
305 x 165	46	218	0.44	1.20	NA	NA
305 x 165	40	249	0.47	1.45	NA	NA
305 x 127	48	183	0.35	0.90	NA	NA
305 x 127	42	208	0.36	1.00	NA	NA
305 x 127	37	234	0.39	1.10	NA	NA
305 x 102	33	246	0.38	1.18	NA	NA
305 x 102	28	287	0.41	1.64	NA	NA
305 x 102	25	319	0.44	1.97	NA	NA
254 x 146	43	202	0.36	0.98	NA	NA
254 x 146	37	233	0.39	1.10	NA	NA
254 x 146	31	275	0.42	1.55	NA	NA
254 x 102	28	261	0.36	1.22	NA	NA
254 x 102	25	289	0.37	1.48	NA	NA
254 x 102	22	326	0.39	NA	NA	NA
203 x 133	30	248	0.35	1.08	NA	NA
203 x 133	25	295	0.35	1.07	NA	NA
203 x 102	23	277	0.31	1.21	NA	NA
178 x 102	19	315	0.33	1.44	NA	NA
152 x 89	16	324	0.28	1.32	NA	NA
127 x 76	13	337	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.2 PROMAPAIN® 60: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED UNIVERSAL COLUMNS: CRITICAL TEMP. 462°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
356 x 406	634	33	0.76	1.97	NA	NA
356 x 406	551	37	0.74	1.92	NA	NA
356 x 406	467	42	0.72	1.87	NA	NA
356 x 406	393	49	0.70	1.83	NA	NA
356 x 406	340	56	0.69	1.80	NA	NA
356 x 406	287	65	0.68	1.77	NA	NA
356 x 406	235	78	0.67	1.74	NA	NA
356 x 368	202	87	0.64	1.80	NA	NA
356 x 368	177	99	0.64	1.91	NA	NA
356 x 368	153	113	0.63	2.02	NA	NA
356 x 368	129	133	0.69	2.25	NA	NA
305 x 305	283	56	0.58	1.50	NA	NA
305 x 305	240	65	0.56	1.47	NA	NA
305 x 305	198	77	0.55	1.44	NA	NA
305 x 305	158	94	0.54	1.57	NA	NA
305 x 305	137	107	0.54	1.66	NA	NA
305 x 305	118	123	0.56	1.80	NA	NA
305 x 305	97	148	0.63	2.05	NA	NA
254 x 254	167	77	0.47	1.22	NA	NA
254 x 254	132	95	0.46	1.32	NA	NA
254 x 254	107	115	0.45	1.43	NA	NA
254 x 254	89	136	0.51	1.63	NA	NA
254 x 254	73	164	0.57	1.79	NA	NA
203 x 203	86	117	0.38	1.21	NA	NA
203 x 203	71	139	0.41	1.36	NA	NA
203 x 203	60	162	0.46	1.45	NA	NA
203 x 203	52	185	0.49	1.65	NA	NA
203 x 203	46	208	0.52	1.95	NA	NA
152 x 152	37	200	0.39	1.43	NA	NA
152 x 152	30	242	0.45	1.80	NA	NA
152 x 152	23	312	0.54	NA	NA	NA

3-SIDED JOISTS (COMPOSITE SLAB): CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
254 x 203	81.85	107	0.32	0.32	1.31	NA	127	0.38	0.38	2.43	NA
254 x 114	37.20	180	0.24	0.43	NA	NA	204	0.32	0.86	NA	NA
203 x 152	52.09	130	0.25	0.25	1.32	NA	153	0.29	0.55	NA	NA
203 x 102	25.33	220	0.21	0.52	NA	NA	252	0.30	0.98	NA	NA
178 x 102	21.54	241	0.22	0.55	NA	NA	278	0.29	1.13	NA	NA
152 x 127	37.20	145	0.20	0.21	1.20	NA	172	0.24	0.59	NA	NA
152 x 89	17.09	263	0.20	0.51	NA	NA	303	0.27	1.17	NA	NA
152 x 76	17.86	234	0.17	0.43	NA	NA	268	0.24	0.84	NA	NA
127 x 114	29.76	157	0.17	0.23	1.19	NA	188	0.22	0.59	NA	NA
127 x 114	26.79	175	0.17	0.28	NA	NA	208	0.23	0.64	NA	NA
127 x 76	16.37	231	0.15	0.39	NA	NA	268	0.22	0.77	NA	NA
127 x 76	13.36	284	0.18	0.47	NA	NA	328	0.24	NA	NA	NA
114 x 114	26.79	167	0.16	0.25	NA	NA	201	0.23	0.61	NA	NA
102 x 102	23.07	173	0.15	0.24	NA	NA	207	0.20	0.55	NA	NA
102 x 64	9.65	320	0.16	0.55	NA	NA	372	NA	NA	NA	NA
102 x 44	7.44	355	NA	NA	NA	NA	402	NA	NA	NA	NA
89 x 89	19.35	180	0.13	0.22	NA	NA	216	0.18	0.50	NA	NA
76 x 76	14.67	210	0.11	0.26	NA	NA	253	0.18	0.57	NA	NA
76 x 76	12.65	236	0.12	0.31	NA	NA	284	0.18	0.71	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.



6.2 PROMAPAIN® 60: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED TAPER FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 1

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	TYPE 2				
432 x 102	65.54	140	0.33	0.33	1.95	NA	100	0.24	0.24	0.86	NA
381 x 102	55.10	152	0.30	0.38	2.01	NA	112	0.23	0.23	0.98	NA
305 x 102	46.18	155	0.26	0.33	1.72	NA	121	0.20	0.20	1.04	NA
305 x 89	41.69	165	0.25	0.36	NA	NA	124	0.19	0.19	0.96	NA
254 x 89	35.74	170	0.22	0.34	NA	NA	134	0.17	0.17	0.98	NA
254 x 76	28.29	204	0.21	0.47	NA	NA	155	0.16	0.20	1.05	NA
229 x 89	32.76	173	0.21	0.34	NA	NA	140	0.17	0.17	0.98	NA
229 x 76	26.06	207	0.20	0.46	NA	NA	161	0.15	0.22	NA	NA
203 x 89	29.78	177	0.19	0.34	NA	NA	147	0.16	0.18	1.01	NA
203 x 76	23.82	209	0.18	0.43	NA	NA	167	0.15	0.23	NA	NA
178 x 89	26.81	182	0.18	0.33	NA	NA	156	0.15	0.21	1.07	NA
178 x 76	20.84	220	0.18	0.43	NA	NA	182	0.14	0.26	NA	NA
152 x 89	23.84	188	0.16	0.32	NA	NA	167	0.15	0.23	NA	NA
152 x 76	17.88	234	0.17	0.43	NA	NA	201	0.13	0.29	NA	NA
127 x 64	14.90	234	0.14	0.36	NA	NA	201	0.11	0.25	NA	NA
102 x 51	10.42	268	0.13	0.33	NA	NA	230	0.10	0.24	NA	NA
76 x 38	6.70	312	0.11	0.33	NA	NA	268	0.08	0.21	NA	NA



TYPE 1



TYPE 2



TYPE 3

3-SIDED TAPER FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 3

Section	Weight/M	A + 2B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	2A + 4B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
432 x 102	65.54	76	0.18	0.18	0.65	NA	152	0.36	0.69	NA	NA
381 x 102	55.10	83	0.17	0.17	0.60	NA	166	0.35	0.80	NA	NA
305 x 102	46.18	86	0.15	0.15	0.52	NA	173	0.30	0.74	NA	NA
305 x 89	41.69	91	0.14	0.14	0.50	NA	182	0.30	0.77	NA	NA
254 x 89	35.74	95	0.12	0.12	0.44	NA	190	0.27	0.72	NA	NA
254 x 76	28.29	113	0.12	0.12	0.51	NA	226	0.28	0.80	NA	NA
229 x 89	32.76	97	0.12	0.12	0.42	NA	195	0.26	0.69	NA	NA
229 x 76	26.06	115	0.11	0.11	0.47	NA	230	0.26	0.75	NA	NA
203 x 89	29.78	100	0.11	0.11	0.39	NA	201	0.25	0.68	NA	NA
203 x 76	23.82	117	0.10	0.10	0.47	NA	234	0.25	0.71	NA	NA
178 x 89	26.81	104	0.10	0.10	0.39	NA	208	0.23	0.64	NA	NA
178 x 76	20.84	124	0.09	0.09	0.48	NA	249	0.25	0.75	NA	NA
152 x 89	23.84	109	0.09	0.09	0.39	NA	217	0.23	0.62	NA	NA
152 x 76	17.88	134	0.09	0.09	0.49	NA	268	0.24	0.84	NA	NA
127 x 64	14.90	134	0.07	0.07	0.41	NA	268	0.20	0.70	NA	NA
102 x 51	10.42	153	0.06	0.07	0.38	NA	306	0.17	0.74	NA	NA
76 x 38	6.70	179	0.04	0.08	NA	NA	357	NA	NA	NA	NA

3-SIDED EQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
200 x 200 x 24	71.10	66	0.17	0.17	0.62	NA	88	0.23	0.23	1.17	NA
200 x 200 x 20	59.90	79	0.17	0.17	0.62	NA	105	0.23	0.23	1.30	NA
200 x 200 x 18	54.20	87	0.17	0.17	0.62	NA	116	0.23	0.23	1.41	NA
200 x 200 x 16	48.50	97	0.17	0.17	0.62	NA	129	0.23	0.23	1.47	NA
150 x 150 x 18	40.10	88	0.13	0.13	0.46	NA	117	0.17	0.17	1.05	NA
150 x 150 x 15	33.80	105	0.13	0.13	0.50	NA	139	0.17	0.24	1.16	NA
150 x 150 x 12	27.30	129	0.13	0.13	0.69	NA	173	0.18	0.44	NA	NA
150 x 150 x 10	23.00	154	0.13	0.16	0.85	NA	205	0.20	0.53	NA	NA
120 x 120 x 15	26.60	106	0.10	0.10	0.42	NA	142	0.14	0.21	0.96	NA
120 x 120 x 12	21.60	131	0.10	0.10	0.58	NA	174	0.14	0.35	NA	NA
120 x 120 x 10	18.20	155	0.10	0.13	0.68	NA	207	0.16	0.43	NA	NA
120 x 120 x 8	14.70	192	0.10	0.21	NA	NA	256	0.18	0.60	NA	NA
100 x 100 x 15	21.90	108	0.09	0.09	0.35	NA	143	0.11	0.18	0.80	NA
100 x 100 x 12	17.80	132	0.09	0.09	0.48	NA	176	0.12	0.31	NA	NA
100 x 100 x 8	12.20	193	0.09	0.18	NA	NA	257	0.15	0.50	NA	NA
90 x 90 x 12	15.90	133	0.08	0.08	0.43	NA	178	0.11	0.30	NA	NA
90 x 90 x 10	13.40	158	0.08	0.10	0.54	NA	211	0.12	0.33	NA	NA
90 x 90 x 8	10.90	194	0.08	0.16	NA	NA	259	0.13	0.45	NA	NA
90 x 90 x 6	8.30	255	0.09	0.24	NA	NA	340	NA	NA	NA	NA

4-SIDED EQUAL ANGLES: CRITICAL TEMP. 550°C

Section	Weight/M	2A + B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
200 x 200 x 24	71.10	66	0.23	0.23	1.17	NA
200 x 200 x 20	59.90	79	0.23	0.23	1.30	NA
200 x 200 x 18	54.20	87	0.23	0.23	1.41	NA
200 x 200 x 16	48.50	97	0.23	0.23	1.47	NA
150 x 150 x 18	40.10	88	0.17	0.24	1.16	NA
150 x 150 x 15	33.80	105	0.17	0.44	NA	NA
150 x 150 x 12	27.30	129	0.18	0.53	NA	NA
150 x 150 x 10	23.00	154	0.20	0.60	NA	NA
120 x 120 x 15	26.60	106	0.14	0.21	0.96	NA
120 x 120 x 12	21.60	131	0.14	0.35	NA	NA
120 x 120 x 10	18.20	155	0.16	0.43	NA	NA
120 x 120 x 8	14.70	192	0.18	0.60	NA	NA
100 x 100 x 15	21.90	108	0.11	0.18	0.80	NA
100 x 100 x 12	17.80	132	0.12	0.31	NA	NA
100 x 100 x 8	12.20	193	0.15	0.50	NA	NA
90 x 90 x 12	15.90	133	0.11	0.30	NA	NA
90 x 90 x 10	13.40	158	0.12	0.33	NA	NA
90 x 90 x 8	10.90	194	0.13	0.45	NA	NA
90 x 90 x 6	8.30	255	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.2 PROMAPAIN® 60: British Standard Steel Sections

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED EQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
80 x 80 x 8	9.63	196	0.07	0.15	NA	NA	261	0.12	0.42	NA	NA
80 x 80 x 6	7.34	257	0.08	0.21	NA	NA	342	NA	NA	NA	NA
70 x 70 x 10	10.30	160	0.06	0.08	0.42	NA	213	0.10	0.26	NA	NA
70 x 70 x 8	8.36	197	0.06	0.13	NA	NA	263	0.11	0.37	NA	NA
70 x 70 x 6	6.38	258	0.07	0.19	NA	NA	345	NA	NA	NA	NA
60 x 60 x 10	8.69	163	0.05	0.07	NA	NA	217	0.08	0.23	NA	NA
60 x 60 x 8	7.09	199	0.05	0.11	NA	NA	266	0.09	0.33	NA	NA
60 x 60 x 6	5.42	261	0.06	0.16	NA	NA	348	NA	NA	NA	NA
60 x 60 x 5	4.57	309	0.07	0.21	NA	NA	412	NA	NA	NA	NA
50 x 50 x 8	5.82	202	0.04	0.10	NA	NA	270	0.08	0.27	NA	NA
50 x 50 x 6	4.47	263	0.05	0.14	NA	NA	351	NA	NA	NA	NA
50 x 50 x 5	3.77	312	0.06	0.19	NA	NA	416	NA	NA	NA	NA
45 x 45 x 6	4.00	265	0.05	0.12	NA	NA	353	NA	NA	NA	NA
45 x 45 x 5	3.38	314	0.05	0.17	NA	NA	418	NA	NA	NA	NA
45 x 45 x 4	2.74	387	NA	NA	NA	NA	516	NA	NA	NA	NA
40 x 40 x 6	3.52	268	0.04	0.11	NA	NA	357	NA	NA	NA	NA
40 x 40 x 5	2.97	317	0.05	0.17	NA	NA	423	NA	NA	NA	NA
40 x 40 x 4	2.42	389	NA	NA	NA	NA	519	NA	NA	NA	NA
25 x 25 x 5	1.77	333	NA	NA	NA	NA	444	NA	NA	NA	NA
25 x 25 x 4	1.45	406	NA	NA	NA	NA	541	NA	NA	NA	NA
25 x 25 x 3	1.11	530	NA	NA	NA	NA	707	NA	NA	NA	NA

3-SIDED UNEQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
200 x 150 x 18	47.10	92	0.16	0.16	0.57	NA	117	0.20	0.20	1.23	NA
200 x 150 x 15	39.60	109	0.16	0.16	0.57	NA	139	0.20	0.28	1.35	NA
200 x 150 x 12	32.00	135	0.16	0.16	0.88	NA	172	0.21	0.51	NA	NA
200 x 100 x 15	33.70	116	0.14	0.14	0.66	NA	140	0.17	0.24	1.16	NA
200 x 100 x 12	27.30	144	0.14	0.15	0.87	NA	173	0.18	0.44	NA	NA
200 x 100 x 10	23.00	171	0.14	0.24	NA	NA	205	0.20	0.53	NA	NA
150 x 90 x 15	26.60	115	0.11	0.11	0.48	NA	142	0.14	0.21	0.96	NA
150 x 90 x 12	21.60	142	0.11	0.12	0.68	NA	174	0.14	0.35	NA	NA
150 x 90 x 10	18.20	168	0.11	0.17	NA	NA	207	0.16	0.43	NA	NA
150 x 75 x 15	24.80	119	0.11	0.11	0.49	NA	142	0.13	0.20	0.90	NA
150 x 75 x 12	20.20	146	0.11	0.12	0.68	NA	175	0.14	0.33	NA	NA
150 x 75 x 10	17.00	173	0.11	0.18	NA	NA	208	0.15	0.41	NA	NA
125 x 75 x 12	17.80	143	0.09	0.10	0.57	NA	176	0.12	0.31	NA	NA
125 x 75 x 10	15.00	170	0.09	0.14	NA	NA	209	0.13	0.36	NA	NA
125 x 75 x 8	12.20	209	0.09	0.22	NA	NA	257	0.15	0.50	NA	NA
100 x 75 x 12	15.40	140	0.08	0.08	0.46	NA	178	0.11	0.28	NA	NA
100 x 75 x 10	13.00	166	0.08	0.12	NA	NA	211	0.12	0.33	NA	NA
100 x 75 x 8	10.60	204	0.08	0.18	NA	NA	259	0.13	0.44	NA	NA
100 x 65 x 10	12.30	169	0.08	0.12	NA	NA	211	0.11	0.31	NA	NA
100 x 65 x 8	9.94	209	0.08	0.18	NA	NA	261	0.13	0.43	NA	NA
100 x 65 x 7	8.77	237	0.08	0.22	NA	NA	295	0.13	0.55	NA	NA
80 x 60 x 8	8.34	207	0.06	0.15	NA	NA	264	0.11	0.37	NA	NA
80 x 60 x 7	7.36	235	0.07	0.18	NA	NA	299	0.12	0.48	NA	NA
80 x 60 x 6	6.37	271	0.08	0.21	NA	NA	345	NA	NA	NA	NA
75 x 50 x 8	7.39	212	0.10	0.14	NA	NA	266	0.10	0.34	NA	NA
75 x 50 x 6	5.65	278	0.07	0.19	NA	NA	347	NA	NA	NA	NA
65 x 50 x 8	6.75	209	0.05	0.12	NA	NA	267	0.09	0.32	NA	NA
65 x 50 x 6	5.16	274	0.06	0.17	NA	NA	350	NA	NA	NA	NA
65 x 50 x 5	4.35	325	0.07	0.26	NA	NA	415	NA	NA	NA	NA

6.3 PROMAPAIN[®] -H: Australian Standard Steel Sections

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED UNIVERSAL BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
610UB125	125.0	120	0.71	1.70	7.24	NA	134	0.79	3.02	7.63	NA
610UB113	113.0	132	0.71	1.83	7.76	NA	148	0.79	3.32	8.53	NA
610UB101	101.0	147	0.70	2.10	8.27	NA	164	0.79	3.61	9.43	NA
530UB92	92.4	144	0.63	1.76	7.30	NA	162	0.71	3.25	8.48	NA
530UB82	82.0	161	0.63	2.00	7.88	NA	181	0.70	3.65	9.56	NA
460UB82	82.1	143	0.56	1.55	6.44	NA	161	0.63	2.88	7.51	NA
460UB74	74.6	156	0.55	1.76	6.84	NA	176	0.62	3.11	8.22	NA
460UB67	67.1	173	0.55	1.87	7.13	NA	195	0.62	3.47	8.79	NA
410UB60	59.7	177	0.50	1.70	6.70	NA	200	0.57	3.17	8.15	NA
410UB54	53.7	196	0.50	1.89	NA	NA	222	0.68	3.60	NA	NA
360UB57	57.0	170	0.46	1.47	5.87	NA	194	0.52	2.92	7.41	NA
360UB51	50.7	190	0.45	1.64	NA	NA	216	0.62	3.22	NA	NA
360UB45	44.7	214	0.45	1.90	NA	NA	244	0.72	3.71	NA	NA
310UB46	46.2	189	0.41	1.49	NA	NA	217	0.57	2.94	NA	NA
310UB40	40.4	214	0.41	1.72	NA	NA	246	0.66	3.49	NA	NA
310UB32	32.0	256	0.39	1.94	NA	NA	292	0.89	4.52	NA	NA
250UB37	37.3	200	0.35	1.34	NA	NA	231	0.49	2.77	NA	NA
250UB31	31.4	235	0.35	1.54	NA	NA	272	0.73	3.64	NA	NA
250UB25	25.7	265	0.32	1.61	NA	NA	303	0.68	3.70	NA	NA
200UB30	29.8	215	0.30	1.27	NA	NA	250	0.49	2.61	NA	NA
200UB25	25.4	249	0.30	1.44	NA	NA	291	0.70	3.56	NA	NA
200UB22	22.3	283	0.30	1.61	NA	NA	329	0.83	4.24	NA	NA
200UB18	18.2	299	0.26	1.44	NA	NA	342	NA	NA	NA	NA
180UB22	22.2	222	0.23	1.03	NA	NA	254	0.43	2.08	NA	NA
180UB18	18.1	269	0.23	1.20	NA	NA	308	0.58	2.90	NA	NA
180UB16	16.1	300	0.23	1.28	NA	NA	344	NA	NA	NA	NA
150UB18	18.0	233	0.20	0.87	NA	NA	266	0.36	1.95	NA	NA
150UB14	14.0	294	0.20	1.09	NA	NA	336	NA	NA	NA	NA

4-SIDED UNIVERSAL COLUMNS: CRITICAL TEMP. 462°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
310UC158	158.0	94	0.70	1.83	4.79	NA
310UC137	137.0	107	0.70	2.09	5.30	NA
310UC118	118.0	123	0.69	2.34	6.07	NA
310UC97	96.8	149	0.68	2.86	7.36	NA
250UC89	89.5	135	0.57	2.18	5.51	NA
250UC73	72.9	164	0.57	2.60	6.79	NA
200UC60	59.5	164	0.46	2.12	5.53	NA
200UC52	52.2	185	0.46	2.37	6.20	NA
200UC46	46.2	207	0.45	2.72	6.88	NA
152UC37	37.2	199	0.35	1.96	5.03	NA
152UC30	30.0	242	0.48	2.48	NA	NA
152UC23	23.4	307	0.75	3.74	NA	NA
100UC15	14.8	313	0.48	2.45	NA	NA

6.3 PROMAPAIN® -H: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED SQUARE HOLLOW SECTIONS COLUMNS: CRITICAL TEMP. 522°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
250 x 250 x 9	65.9	119	0.74	2.60	4.98	NA
250 x 250 x 6	45	174	0.74	3.05	NA	NA
200 x 200 x 9	51.8	121	0.59	2.08	3.98	NA
200 x 200 x 6	35.6	176	0.59	2.50	NA	NA
200 x 200 x 5	29.9	210	0.59	2.67	NA	NA
150 x 150 x 9	37.7	125	0.45	1.56	2.99	NA
150 x 150 x 6	26.2	180	0.45	1.87	NA	NA
150 x 150 x 5	22.1	213	0.45	2.05	NA	NA
125 x 125 x 9	30.6	128	0.37	1.34	2.53	NA
125 x 125 x 6	21.4	183	0.37	1.56	NA	NA
125 x 125 x 5	18.2	216	0.37	1.71	NA	NA
125 x 125 x 4	14.8	265	0.37	1.89	NA	NA
100 x 100 x 9	23.5	134	0.30	1.10	2.02	NA
100 x 100 x 6	16.7	188	0.30	1.28	NA	NA
100 x 100 x 5	14.2	221	0.30	1.40	NA	NA
100 x 100 x 4	11.6	271	0.33	1.55	NA	NA
100 x 100 x 3	8.96	350	0.62	1.81	NA	NA
89 x 89 x 6	14.7	190	0.26	1.14	NA	NA
89 x 89 x 5	12.5	224	0.26	1.24	NA	NA
89 x 89 x 3.5	9.07	308	0.40	1.48	NA	NA
75 x 75 x 6	12	196	0.22	0.98	NA	NA
75 x 75 x 5	10.3	229	0.22	1.05	NA	NA
75 x 75 x 4	8.49	277	0.25	1.18	NA	NA
75 x 75 x 3.5	7.53	313	0.36	1.27	NA	NA
65 x 65 x 6	10.1	202	0.19	0.87	NA	NA
65 x 65 x 5	8.75	233	0.19	0.93	NA	NA
65 x 65 x 4	7.23	282	0.23	1.04	NA	NA
65 x 65 x 3	5.66	361	0.44	1.22	NA	NA
50 x 50 x 5	6.39	246	0.15	0.74	NA	NA
50 x 50 x 4	5.35	293	0.19	0.82	NA	NA
50 x 50 x 3	4.25	369	0.36	0.94	NA	NA
40 x 40 x 4	4.09	307	0.18	0.67	NA	NA
40 x 40 x 3	3.3	381	0.31	0.77	NA	NA
35 x 35 x 3	2.82	390	0.27	0.68	NA	NA
30 x 30 x 2	1.68	561	NA	NA	NA	NA
25 x 25 x 3	1.89	415	0.22	0.51	NA	NA
20 x 20 x 1.6	0.873	719	NA	NA	NA	NA
15 x 15 x 1.8	0.681	692	NA	NA	NA	NA

4-SIDED RECTANGULAR HOLLOW SECTIONS COLUMNS: CRITICAL TEMP. 522°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
250 x 150 x 9	51.8	121	0.59	2.08	3.98	NA
250 x 150 x 6	35.6	176	0.59	2.50	NA	NA
250 x 150 x 5	29.9	210	0.59	2.67	NA	NA
200 x 100 x 9	37.7	125	0.45	1.56	NA	NA
200 x 100 x 6	26.2	180	0.45	1.87	NA	NA
200 x 100 x 5	22.1	213	0.45	2.05	NA	NA
200 x 100 x 4	17.9	263	0.45	2.27	NA	NA
150 x 100 x 6	21.4	191	0.39	1.66	NA	NA
150 x 100 x 5	18.2	216	0.37	1.71	NA	NA
150 x 100 x 4	14.8	265	0.37	1.89	NA	NA
150 x 50 x 5	14.2	221	0.30	1.40	NA	NA
150 x 50 x 4	11.6	271	0.33	1.55	NA	NA
150 x 50 x 3	8.96	350	0.62	1.81	NA	NA
125 x 75 x 6	16.7	188	0.30	1.28	NA	NA
125 x 75 x 5	14.2	221	0.30	1.40	NA	NA
125 x 75 x 4	11.6	271	0.33	1.55	NA	NA
125 x 75 x 3	8.96	350	0.62	1.81	NA	NA
100 x 50 x 6	12	196	0.22	0.98	NA	NA
100 x 50 x 5	10.3	229	0.22	1.05	NA	NA
100 x 50 x 4	8.49	277	0.25	1.18	NA	NA
100 x 50 x 3.5	7.53	313	0.36	1.27	NA	NA
100 x 50 x 3	6.6	357	0.49	1.38	NA	NA
75 x 50 x 5	8.35	235	0.19	0.89	NA	NA
75 x 50 x 4	6.92	284	0.22	1.00	NA	NA
75 x 50 x 3	5.42	362	0.43	1.17	NA	NA
65 x 35 x 3	4.25	369	0.36	0.94	NA	NA
50 x 25 x 3	3.07	384	0.29	0.72	NA	NA
50 x 20 x 3	2.83	388	0.27	0.68	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.
Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.3 PROMAPAIN® -H: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

CIRCULAR HOLLOW SECTIONS: CRITICAL TEMP. 522°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
457	139	81	1.07	3.63	6.72	NA
457	195	58	1.07	3.63	6.61	NA
457	71.1	159	1.07	4.16	7.57	NA
406	123	81	0.95	3.23	5.98	NA
406	93	108	0.95	3.23	6.26	NA
406	63.1	159	0.95	3.70	6.74	NA
356	107	82	0.83	2.82	5.23	NA
356	81.1	108	0.83	2.82	5.48	NA
356	55.1	159	0.83	3.24	5.89	NA
324	97.5	82	0.76	2.57	4.76	NA
324	73.7	108	0.76	2.57	4.99	NA
324	50.1	159	0.76	2.95	5.37	NA
273	60.5	111	0.64	2.17	4.21	NA
273	42.1	160	0.64	2.49	4.53	NA
273	31.8	212	0.64	2.93	NA	NA
220	42.6	127	0.51	1.84	3.48	NA
220	33.6	161	0.51	2.05	NA	NA
220	25.4	213	0.51	2.35	NA	NA
168	28.2	147	0.39	1.49	2.75	NA
168	25.6	162	0.39	1.57	NA	NA
168	19.4	214	0.39	1.81	NA	NA
114	16	176	0.27	1.12	NA	NA
114	13	217	0.27	1.23	NA	NA
89	12	183	0.21	0.87	NA	NA
76	6.5	289	0.21	0.96	NA	NA
60	4.25	350	0.30	0.86	NA	NA
48	3.36	355	0.25	0.70	NA	NA
42	2.65	395	0.27	0.65	NA	NA
34	2.07	402	0.23	0.53	NA	NA
27	1.46	454	NA	NA	NA	NA
21	1	525	NA	NA	NA	NA

3-SIDED PARALLEL FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 1

TYPE 2

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	A + 4B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
380	55.20	151	0.39	1.18	4.54	NA	111	0.29	0.64	2.90	NA
300	40.10	170	0.32	1.03	4.14	NA	129	0.25	0.64	2.65	NA
250	35.30	171	0.29	0.97	3.72	NA	136	0.23	0.63	2.54	NA
230	25.10	214	0.25	1.07	NA	NA	166	0.20	0.63	2.52	NA
200	22.90	214	0.23	0.98	NA	NA	171	0.19	0.63	2.41	NA
180	20.90	220	0.22	0.91	NA	NA	180	0.18	0.61	2.39	NA
150	17.70	233	0.20	0.86	NA	NA	200	0.17	0.64	NA	NA
125	11.90	294	0.17	0.93	NA	NA	254	0.14	0.69	NA	NA
100	8.33	330	0.18	0.81	NA	NA	283	0.11	0.60	NA	NA
75	5.92	358	NA	NA	NA	NA	312	0.10	0.52	NA	NA



TYPE 1



TYPE 2



TYPE 3

3-SIDED PARALLEL FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 3

4-SIDED PARALLEL FLANGE CHANNELS: CRITICAL TEMP. 550°C

Section	Weight/M	A + 2B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	2A + 4B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
380	55.20	82	0.22	0.39	1.77	NA	165	0.43	1.98	5.17	NA
300	40.10	94	0.18	0.32	1.57	NA	188	0.36	1.93	4.92	NA
250	35.30	96	0.16	0.32	1.44	NA	191	0.32	1.79	4.54	NA
230	25.10	119	0.14	0.34	1.44	NA	238	0.40	1.92	NA	NA
200	22.90	120	0.13	0.31	1.33	NA	240	0.36	1.77	NA	NA
180	20.90	124	0.12	0.29	1.27	NA	248	0.34	1.81	NA	NA
150	17.70	133	0.11	0.29	1.23	NA	266	0.36	1.92	NA	NA
125	11.90	168	0.09	0.30	1.21	NA	336	NA	NA	NA	NA
100	8.33	188	0.07	0.27	NA	NA	377	NA	NA	NA	NA
75	5.92	206	0.06	0.23	NA	NA	411	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.3 PROMAPAIN® -H: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED EQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
200 x 200 x 26	76.80	61	0.22	0.31	1.60	NA	82	0.30	0.65	2.02	NA
200 x 200 x 20	60.10	78	0.22	0.36	1.78	NA	104	0.30	0.83	2.14	NA
200 x 200 x 18	54.40	87	0.22	0.40	1.92	NA	115	0.30	0.95	2.38	NA
200 x 200 x 16	48.70	97	0.22	0.45	2.01	NA	129	0.30	1.07	2.73	NA
200 x 200 x 13	40.00	118	0.22	0.53	2.27	NA	157	0.30	1.31	3.45	NA
150 x 150 x 19	42.10	84	0.17	0.30	1.37	NA	112	0.22	0.71	1.78	NA
150 x 150 x 16	35.40	100	0.17	0.33	1.50	NA	133	0.22	0.85	2.14	NA
150 x 150 x 12	27.30	129	0.17	0.43	1.81	NA	173	0.22	1.11	2.81	NA
150 x 150 x 10	21.90	161	0.17	0.53	2.11	NA	215	0.22	1.38	NA	NA
125 x 125 x 16	29.10	101	0.14	0.28	1.31	NA	135	0.19	0.71	1.78	NA
125 x 125 x 12	22.50	131	0.14	0.36	1.53	NA	174	0.19	0.93	2.34	NA
125 x 125 x 10	18.00	164	0.14	0.45	1.76	NA	218	0.22	1.15	NA	NA
125 x 125 x 8	14.90	198	0.14	0.53	NA	NA	263	0.30	1.56	NA	NA
100 x 100 x 12	17.70	133	0.11	0.29	1.23	NA	177	0.15	0.74	1.96	NA
100 x 100 x 10	14.20	166	0.11	0.36	1.43	NA	221	0.18	0.95	NA	NA
100 x 100 x 8	11.80	200	0.11	0.42	NA	NA	266	0.24	1.28	NA	NA
100 x 100 x 6	9.16	257	0.11	0.56	NA	NA	343	NA	NA	NA	NA
90 x 90 x 10	12.70	167	0.10	0.32	1.28	NA	223	0.16	0.86	NA	NA
90 x 90 x 8	10.60	200	0.10	0.38	NA	NA	267	0.21	1.15	NA	NA
90 x 90 x 6	8.22	258	0.10	0.50	NA	NA	344	NA	NA	NA	NA
75 x 75 x 10	10.50	168	0.08	0.27	1.07	NA	224	0.13	0.71	NA	NA
75 x 75 x 8	8.73	202	0.08	0.33	NA	NA	270	0.18	0.96	NA	NA
75 x 75 x 6	6.81	259	0.08	0.42	NA	NA	346	NA	NA	NA	NA
75 x 75 x 5	5.27	335	NA	NA	NA	NA	447	NA	NA	NA	NA
65 x 65 x 10	9.02	170	0.07	0.23	0.93	NA	226	0.12	0.64	NA	NA
65 x 65 x 8	7.51	204	0.07	0.29	NA	NA	272	0.17	0.87	NA	NA
65 x 65 x 6	5.87	261	0.07	0.36	NA	NA	348	NA	NA	NA	NA
65 x 65 x 5	4.56	336	NA	NA	NA	NA	448	NA	NA	NA	NA
55 x 55 x 6	4.93	263	0.06	0.31	NA	NA	350	NA	NA	NA	NA
55 x 55 x 5	3.84	337	NA	NA	NA	NA	450	NA	NA	NA	NA
50 x 50 x 8	5.68	207	0.06	0.22	NA	NA	276	0.13	0.68	NA	NA
50 x 50 x 6	4.46	264	0.06	0.28	NA	NA	352	NA	NA	NA	NA
50 x 50 x 5	3.48	338	NA	NA	NA	NA	451	NA	NA	NA	NA
45 x 45 x 6	3.97	267	0.05	0.26	NA	NA	356	NA	NA	NA	NA
45 x 45 x 5	3.10	342	NA	NA	NA	NA	456	NA	NA	NA	NA
40 x 40 x 6	3.50	269	0.04	0.23	NA	NA	359	NA	NA	NA	NA
40 x 40 x 5	2.73	345	NA	NA	NA	NA	460	NA	NA	NA	NA
30 x 30 x 6	2.56	276	0.03	0.18	NA	NA	368	NA	NA	NA	NA
30 x 30 x 5	2.01	351	NA	NA	NA	NA	469	NA	NA	NA	NA
25 x 25 x 6	2.08	283	0.03	0.15	NA	NA	377	NA	NA	NA	NA
25 x 25 x 5	1.65	357	NA	NA	NA	NA	476	NA	NA	NA	NA

3-SIDED UNEQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
150 x 100 x 12	22.50	140	0.15	0.42	1.66	NA	174	0.19	0.93	2.34	NA
150 x 100 x 10	18.00	174	0.15	0.51	1.93	NA	218	0.22	1.15	NA	NA
150 x 90 x 16	27.90	110	0.14	0.32	1.39	NA	135	0.18	0.68	1.71	NA
150 x 90 x 12	21.60	142	0.14	0.41	1.68	NA	174	0.18	0.89	2.25	NA
150 x 90 x 10	17.30	177	0.14	0.49	1.94	NA	218	0.21	1.11	NA	NA
150 x 90 x 8	14.30	214	0.14	0.61	NA	NA	263	0.29	1.50	NA	NA
125 x 75 x 12	17.70	144	0.12	0.34	1.40	NA	177	0.15	0.74	1.96	NA
125 x 75 x 10	14.20	180	0.12	0.41	1.62	NA	221	0.18	0.95	NA	NA
125 x 75 x 8	11.80	216	0.12	0.51	NA	NA	266	0.24	1.28	NA	NA
125 x 75 x 6	9.16	279	0.12	0.65	NA	NA	343	NA	NA	NA	NA
100 x 75 x 10	12.40	174	0.10	0.35	1.33	NA	222	0.16	0.83	NA	NA
100 x 75 x 8	10.30	210	0.10	0.41	NA	NA	267	0.21	1.12	NA	NA
100 x 75 x 6	7.98	271	0.10	0.53	NA	NA	344	NA	NA	NA	NA
75 x 50 x 8	7.23	217	0.07	0.31	NA	NA	271	0.17	0.84	NA	NA
75 x 50 x 6	5.66	277	0.07	0.40	NA	NA	347	NA	NA	NA	NA
75 x 50 x 5	4.40	357	NA	NA	NA	NA	446	NA	NA	NA	NA
65 x 50 x 8	6.59	214	0.07	0.28	NA	NA	274	0.15	0.77	NA	NA
65 x 50 x 6	5.16	274	0.07	0.35	NA	NA	350	NA	NA	NA	NA
65 x 50 x 5	4.02	351	NA	NA	NA	NA	449	NA	NA	NA	NA

6.3 PROMAPAIN® -H: Australian Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED WELDED COLUMNS: CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
500WC440	440.0	53	1.10	1.54	7.48	NA
500WC414	414.0	56	1.10	1.54	7.48	NA
500WC383	383.0	60	1.09	1.53	7.44	NA
500WC340	340.0	70	1.12	2.02	7.65	NA
500WC290	290.0	82	1.12	2.46	7.61	NA
500WC267	267.0	88	1.11	2.67	7.58	NA
500WC228	228.0	103	1.11	3.10	7.97	NA
400WC361	361.0	53	0.91	1.28	6.21	NA
400WC328	328.0	59	0.91	1.28	6.21	NA
400WC303	303.0	63	0.91	1.45	6.17	NA
400WC270	270.0	71	0.90	1.80	6.13	NA
400WC212	212.0	89	0.89	2.14	6.06	NA
400WC181	181.0	103	0.88	2.48	6.37	NA
400WC144	144.0	129	0.88	3.16	8.08	NA
350WC280	280.0	59	0.78	1.10	5.33	NA
350WC258	258.0	64	0.78	1.24	5.29	NA
350WC230	230.0	71	0.77	1.54	5.25	NA
350WC197	197.0	82	0.77	1.69	5.21	NA

3-SIDED WELDED BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
1200WB455	455.0	67	1.45	2.03	10.72	NA	76	0.07	0.15	0.51	NA
1200WB423	423.0	72	1.44	2.31	11.25	NA	81	0.07	0.16	0.51	NA
1200WB392	392.0	77	1.44	2.30	11.49	NA	87	0.07	0.18	0.51	NA
1200WB342	342.0	82	1.33	2.39	10.87	NA	91	0.07	0.19	0.51	NA
1200WB317	317.0	88	1.32	2.38	11.35	NA	98	0.07	0.19	0.51	NA
1200WB278	278.0	96	1.26	2.52	11.33	NA	106	0.07	0.22	0.56	NA
1200WB249	249.0	100	1.18	2.35	10.58	NA	108	0.07	0.22	0.56	NA
1000WB322	322.0	79	1.21	1.93	9.65	NA	89	0.07	0.18	0.51	NA
1000WB296	296.0	86	1.20	2.16	10.33	NA	96	0.07	0.19	0.51	NA
1000WB258	258.0	93	1.14	2.05	10.04	NA	104	0.07	0.21	0.53	NA
1000WB215	215.0	106	1.08	2.37	10.34	NA	117	0.07	0.24	0.62	NA
900WB282	282.0	85	1.13	2.04	9.28	NA	96	0.07	0.19	0.51	NA
900WB257	257.0	93	1.13	2.03	9.91	NA	105	0.07	0.21	0.53	NA
900WB218	218.0	103	1.07	2.13	10.02	NA	116	0.07	0.24	0.62	NA
900WB175	175.0	121	1.00	2.41	10.43	NA	135	0.07	0.28	0.71	NA
800WB192	192.0	104	0.94	1.88	8.84	NA	116	0.07	0.24	0.62	NA
800WB168	168.0	114	0.91	2.00	9.08	NA	127	0.07	0.27	0.68	NA
800WB146	146.0	130	0.90	2.34	9.73	NA	145	0.07	0.30	0.77	NA
800WB122	122.0	150	0.87	2.60	10.23	NA	166	0.08	0.37	0.97	NA
700WB173	173.0	102	0.84	1.68	7.88	NA	115	0.07	0.24	0.59	NA
700WB150	150.0	114	0.81	1.77	8.06	NA	127	0.07	0.27	0.68	NA
700WB130	130.0	130	0.80	2.08	8.63	NA	145	0.07	0.30	0.77	NA
700WB115	115.0	146	0.79	2.38	9.35	NA	163	0.07	0.34	0.89	NA

3-SIDED TAPER FLANGE BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
125 TFB	13.1	267	0.17	0.86	NA	NA	306	0.36	1.82	NA	NA
100 TFB	7.2	365	NA	NA	NA	NA	414	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED UNIVERSAL BEAMS (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
914 x 419	388	63	1.15	1.61	8.30	NA
914 x 419	343	70	1.14	1.60	8.46	NA
914 x 305	289	75	1.03	1.65	8.05	NA
914 x 305	253	85	1.02	1.84	8.39	NA
914 x 305	224	96	1.02	2.03	9.14	NA
914 x 305	201	106	1.01	2.22	9.69	NA
838 x 292	226	90	0.96	1.73	8.25	NA
838 x 292	194	104	0.95	1.90	8.93	NA
838 x 292	176	113	0.95	2.08	9.45	NA
762 x 267	197	93	0.87	1.57	7.66	NA
762 x 267	173	105	0.86	1.73	8.12	NA
762 x 267	147	123	0.86	2.05	8.90	NA
686 x 254	170	99	0.80	1.60	7.20	NA
686 x 254	152	110	0.79	1.75	7.63	NA
686 x 254	140	119	0.79	1.90	8.06	NA
686 x 254	125	133	0.79	2.04	8.64	NA
610 x 305	238	73	0.82	1.31	6.38	NA
610 x 305	179	95	0.80	1.44	7.05	NA
610 x 305	149	112	0.79	1.74	7.93	NA
610 x 229	140	108	0.71	1.57	6.86	NA
610 x 229	125	120	0.71	1.70	7.24	NA
610 x 229	113	132	0.71	1.83	7.76	NA
610 x 229	101	147	0.70	2.10	8.27	NA
533 x 210	122	111	0.64	1.41	6.41	NA
533 x 210	109	123	0.64	1.53	6.61	NA
533 x 210	101	132	0.63	1.65	6.96	NA
533 x 210	92	145	0.63	1.76	7.30	NA
533 x 210	82	161	0.63	2.00	7.88	NA
457 x 191	98	121	0.56	1.35	5.85	NA
457 x 191	89	133	0.56	1.45	6.14	NA
457 x 191	82	143	0.56	1.55	6.44	NA
457 x 191	74	158	0.55	1.77	6.84	NA
457 x 191	67	173	0.55	1.87	7.13	NA
457 x 152	82	133	0.52	1.34	5.68	NA
457 x 152	74	146	0.51	1.54	6.05	NA
457 x 152	67	161	0.51	1.63	6.41	NA
457 x 152	60	179	0.51	1.73	6.81	NA
457 x 152	52	205	0.50	2.02	NA	NA
406 x 178	74	145	0.51	1.42	5.88	NA
406 x 178	67	159	0.50	1.61	6.24	NA
406 x 178	60	176	0.50	1.70	6.70	NA
406 x 178	54	195	0.50	1.89	NA	NA
406 x 140	46	210	0.46	1.83	NA	NA
406 x 140	39	246	0.45	2.18	NA	NA
356 x 171	67	146	0.46	1.39	5.47	NA
356 x 171	57	170	0.46	1.47	5.87	NA
356 x 171	51	189	0.46	1.64	NA	NA
356 x 171	45	212	0.45	1.90	NA	NA
356 x 127	39	218	0.40	1.69	NA	NA
356 x 127	33	255	0.40	1.91	NA	NA
305 x 165	54	163	0.42	1.33	5.25	NA
305 x 165	46	190	0.41	1.49	NA	NA
305 x 165	40	216	0.41	1.72	NA	NA
305 x 127	48	163	0.37	1.18	4.66	NA
305 x 127	42	184	0.37	1.32	4.98	NA
305 x 127	37	208	0.36	1.45	NA	NA
305 x 102	33	222	0.35	1.52	NA	NA
305 x 102	28	259	0.34	1.72	NA	NA
305 x 102	25	287	0.34	1.90	NA	NA
254 x 146	43	175	0.36	1.21	4.64	NA
254 x 146	37	202	0.35	1.41	NA	NA
254 x 146	31	238	0.35	1.61	NA	NA
254 x 102	28	232	0.31	1.35	NA	NA
254 x 102	25	257	0.30	1.52	NA	NA
254 x 102	22	290	0.30	1.69	NA	NA
203 x 133	30	213	0.30	1.27	NA	NA
203 x 133	25	253	0.30	1.44	NA	NA
203 x 102	23	243	0.26	1.22	NA	NA
178 x 102	19	273	0.25	1.28	NA	NA
152 x 89	16	280	0.21	1.15	NA	NA
127 x 76	13	291	0.18	1.00	NA	NA

4-SIDED UNIVERSAL BEAMS: CRITICAL TEMP. 550°C

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
914 x 419	388	71	1.31	2.62	8.90	NA
914 x 419	343	80	1.30	2.60	8.83	NA
914 x 305	289	84	1.15	2.52	7.79	NA
914 x 305	253	95	1.14	2.95	7.73	NA
914 x 305	224	106	1.13	3.38	8.57	NA
914 x 305	201	118	1.12	3.59	9.42	NA
838 x 292	226	100	1.07	2.78	7.27	NA
838 x 292	194	115	1.06	3.39	8.47	NA
838 x 292	176	127	1.05	3.79	9.69	NA
762 x 267	197	104	0.97	2.72	6.98	NA
762 x 267	173	118	0.96	3.08	8.08	NA
762 x 267	147	137	0.95	3.63	9.54	NA
686 x 254	170	111	0.89	2.86	7.16	NA
686 x 254	152	124	0.89	3.02	7.82	NA
686 x 254	140	134	0.88	3.36	8.49	NA
686 x 254	125	149	0.88	3.69	9.50	NA
610 x 305	238	83	0.93	2.05	6.35	NA
610 x 305	179	108	0.91	2.74	6.95	NA
610 x 305	149	128	0.91	3.26	8.33	NA
610 x 229	140	121	0.80	2.72	7.04	NA
610 x 229	125	134	0.79	3.02	7.63	NA
610 x 229	113	148	0.79	3.32	8.53	NA
610 x 229	101	164	0.79	3.61	9.43	NA
533 x 210	122	125	0.72	2.45	6.33	NA
533 x 210	109	138	0.71	2.71	7.14	NA
533 x 210	101	149	0.71	2.99	7.68	NA
533 x 210	92	162	0.71	3.25	8.48	NA
533 x 210	82	181	0.70	3.65	9.56	NA
457 x 191	98	137	0.63	2.41	6.34	NA
457 x 191	89	150	0.63	2.64	6.80	NA
457 x 191	82	161	0.63	2.88	7.51	NA
457 x 191	74	175	0.62	3.11	7.85	NA
457 x 191	67	195	0.62	3.47	8.79	NA
457 x 152	82	148	0.57	2.41	6.20	NA
457 x 152	74	163	0.57	2.62	6.84	NA
457 x 152	67	178	0.57	2.83	7.46	NA
457 x 152	60	199	0.57	3.16	8.14	NA
457 x 152	52	228	0.67	3.70	NA	NA
406 x 178	74	164	0.57	2.64	6.88	NA
406 x 178	67	180	0.57	2.85	7.52	NA
406 x 178	60	199	0.57	3.17	8.15	NA
406 x 178	54	220	0.68	3.49	NA	NA
406 x 140	46	235	0.61	3.47	NA	NA
406 x 140	39	274	0.91	4.55	NA	NA
356 x 171	67	166	0.53	2.53	6.54	NA
356 x 171	57	194	0.52	2.92	7.41	NA
356 x 171	51	215	0.52	3.22	NA	NA
356 x 171	45	242	0.72	3.71	NA	NA
356 x 127	39	243	0.63	3.24	NA	NA
356 x 127	33	285	0.80	4.27	NA	NA
305 x 165	54	187	0.48	2.49	6.61	NA
305 x 165	46	218	0.57	2.94	NA	NA
305 x 165	40	249	0.66	3.49	NA	NA
305 x 127	48	183	0.42	2.17	5.67	NA
305 x 127	42	208	0.41	2.47	6.27	NA
305 x 127	37	234	0.49	2.78	NA	NA
305 x 102	33	246	0.54	2.85	NA	NA
305 x 102	28	287	0.69	3.73	NA	NA
305 x 102	25	319	0.83	4.38	NA	NA
254 x 146	43	202	0.41	2.39	6.09	NA
254 x 146	37	233	0.49	1.14	NA	NA
254 x 146	31	275	0.73	3.64	NA	NA
254 x 102	28	261	0.55	2.90	NA	NA
254 x 102	25	289	0.62	3.36	NA	NA
254 x 102	22	326	0.82	4.14	NA	NA
203 x 133	30	248	0.49	2.61	NA	NA
203 x 133	25	295	0.70	3.56	NA	NA
203 x 102	23	277	0.54	2.78	NA	NA
178 x 102	19	315	0.62	3.17	NA	NA
152 x 89	16	324	0.59	2.94	NA	NA
127 x 76	13	337	NA	NA	NA	NA

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED UNIVERSAL COLUMNS: CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
356 x 406	634	33	0.98	1.18	6.68	NA
356 x 406	551	37	0.96	1.15	6.53	NA
356 x 406	467	42	0.94	1.12	6.37	NA
356 x 406	393	49	0.92	1.10	6.23	NA
356 x 406	340	56	0.90	1.26	6.13	NA
356 x 406	287	65	0.89	1.42	6.02	NA
356 x 406	235	78	0.87	1.74	5.92	NA
356 x 368	202	87	0.83	2.00	5.68	NA
356 x 368	177	99	0.83	2.15	5.62	NA
356 x 368	153	113	0.82	2.62	6.55	NA
356 x 368	129	133	0.81	3.08	7.79	NA
305 x 305	283	56	0.75	1.05	5.10	NA
305 x 305	240	65	0.73	1.17	4.99	NA
305 x 305	198	77	0.72	1.44	4.89	NA
305 x 305	158	94	0.70	1.83	4.79	NA
305 x 305	137	107	0.70	2.09	5.30	NA
305 x 305	118	123	0.69	2.34	6.07	NA
305 x 305	97	148	0.68	2.86	7.36	NA
254 x 254	167	77	0.61	1.22	4.13	NA
254 x 254	132	95	0.59	1.54	4.03	NA
254 x 254	107	115	0.58	1.86	4.66	NA
254 x 254	89	136	0.57	2.18	5.74	NA
254 x 254	73	164	0.57	2.60	6.79	NA
203 x 203	86	117	0.48	1.52	3.99	NA
203 x 203	71	139	0.47	1.77	4.67	NA
203 x 203	60	162	0.46	2.12	5.53	NA
203 x 203	52	185	0.46	2.37	6.20	NA
203 x 203	46	208	0.45	2.72	6.88	NA
152 x 152	37	200	0.35	1.96	5.03	NA
152 x 152	30	242	0.48	2.48	NA	NA
152 x 152	23	312	0.75	3.80	NA	NA

4-SIDED SQUARE HOLLOW SECTIONS COLUMNS: CRITICAL TEMP. 522°C Continued on opposite page

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
400 x 400 x 20	237	53	1.19	4.04	7.37	NA
400 x 400 x 16	192	65	1.19	4.04	7.37	NA
400 x 400 x 12.5	152	83	1.19	4.04	7.49	NA
400 x 400 x 20	122	103	1.19	4.04	7.73	NA
350 x 350 x 16	167	66	1.04	3.54	6.55	NA
350 x 350 x 12.5	132	83	1.04	3.54	6.55	NA
350 x 350 x 10	106	104	1.04	3.54	6.76	NA
350 x 350 x 8	85.7	128	1.04	3.74	7.07	NA
300 x 300 x 16	142	66	0.89	3.03	5.62	NA
300 x 300 x 12.5	112	84	0.89	3.03	5.62	NA
300 x 300 x 10	90.7	104	0.89	3.03	5.80	NA
300 x 300 x 8	73.1	129	0.89	3.21	6.06	NA
300 x 300 x 6.3	57.9	163	0.89	3.57	NA	NA
250 x 250 x 16	117	67	0.74	2.53	4.68	NA
250 x 250 x 12.5	92.6	85	0.74	2.53	4.68	NA
250 x 250 x 10	75	105	0.74	2.53	4.83	NA
250 x 250 x 8	60.5	130	0.74	2.67	5.05	NA
250 x 250 x 6.3	48.1	163	0.74	2.97	NA	NA
200 x 200 x 16	91.5	69	0.59	2.02	3.74	NA
200 x 200 x 12.5	73	86	0.59	2.02	3.74	NA
200 x 200 x 10	59.3	106	0.59	2.02	3.92	NA
200 x 200 x 8	48	131	0.59	2.20	4.04	NA
200 x 200 x 6.3	38.2	164	0.59	2.38	NA	NA
200 x 200 x 5	30.5	206	0.59	2.67	NA	NA

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED SQUARE HOLLOW SECTIONS COLUMNS: CRITICAL TEMP. 522°C Continued from opposite page

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
180 x 180 x 16	81.4	69	0.53	1.82	3.37	NA
180 x 180 x 12.5	65.2	87	0.53	1.82	3.37	NA
180 x 180 x 10	53	107	0.53	1.82	3.53	NA
180 x 180 x 8	43	131	0.53	1.98	3.64	NA
180 x 180 x 6.3	34.2	165	0.53	2.14	NA	NA
160 x 160 x 12.5	57.3	88	0.48	1.62	3.00	NA
160 x 160 x 10	46.7	108	0.48	1.62	3.14	NA
160 x 160 x 8	37.9	133	0.48	1.62	3.23	NA
160 x 160 x 6.3	30.3	166	0.48	1.95	NA	NA
160 x 160 x 5	24.2	208	0.48	2.14	NA	NA
150 x 150 x 16	66.4	71	0.45	1.52	2.81	NA
150 x 150 x 12.5	53.4	88	0.45	1.52	2.81	NA
150 x 150 x 10	43.6	108	0.45	1.52	2.94	NA
150 x 150 x 8	35.4	133	0.45	1.65	3.03	NA
150 x 150 x 6.3	28.3	166	0.45	1.83	NA	NA
150 x 150 x 5	22.7	207	0.45	2.01	NA	NA
140 x 140 x 12.5	49.5	89	0.42	1.41	2.62	NA
140 x 140 x 10	40.4	109	0.42	1.41	2.75	NA
140 x 140 x 8	32.9	134	0.42	1.54	2.83	NA
140 x 140 x 6.3	26.3	167	0.42	1.71	NA	NA
140 x 140 x 5	21.1	208	0.42	1.87	NA	NA
120 x 120 x 12.5	41.6	91	0.36	1.21	2.28	NA
120 x 120 x 10	34.2	110	0.36	1.21	2.35	NA
120 x 120 x 8	27.9	135	0.36	1.32	2.42	NA
120 x 120 x 6.3	22.3	169	0.36	1.46	NA	NA
120 x 120 x 5	18	209	0.36	1.60	NA	NA
100 x 100 x 10	27.9	113	0.30	1.01	1.96	NA
100 x 100 x 8	22.9	137	0.30	1.10	2.05	NA
100 x 100 x 6.3	18.4	171	0.30	1.22	NA	NA
100 x 100 x 5	14.8	212	0.30	1.37	NA	NA
100 x 100 x 4	12	262	0.30	1.52	NA	NA
90 x 90 x 8	20.4	139	0.27	0.99	1.85	NA
90 x 90 x 6.3	16.4	172	0.27	1.10	NA	NA
90 x 90 x 5	13.3	212	0.27	1.23	NA	NA
90 x 90 x 3.6	9.72	291	0.35	1.47	NA	NA
80 x 80 x 8	17.8	141	0.24	0.90	1.64	NA
80 x 80 x 6.3	14.4	174	0.24	0.97	NA	NA
80 x 80 x 5	11.7	215	0.24	1.09	NA	NA
80 x 80 x 3.6	8.59	292	0.31	1.31	NA	NA
80 x 80 x 3	7.22	348	0.50	1.45	NA	NA
70 x 70 x 8	15.3	144	0.21	0.79	1.44	NA
70 x 70 x 6.3	12.5	176	0.21	0.87	NA	NA
70 x 70 x 5	10.1	218	0.21	0.96	NA	NA
70 x 70 x 3.6	7.46	295	0.27	1.23	NA	NA
70 x 70 x 3	6.28	350	0.44	1.27	NA	NA
60 x 60 x 8	12.8	147	0.18	0.68	1.25	NA
60 x 60 x 6.3	10.5	179	0.18	0.75	NA	NA
60 x 60 x 5	8.54	221	0.18	0.84	NA	NA
60 x 60 x 4	6.97	270	0.18	0.93	NA	NA
60 x 60 x 3.2	5.67	332	0.34	1.05	NA	NA
60 x 60 x 3	5.34	353	0.39	1.11	NA	NA
50 x 50 x 6.3	8.49	185	0.15	0.62	NA	NA
50 x 50 x 5	6.97	225	0.15	0.70	NA	NA
50 x 50 x 4	5.72	274	0.16	0.77	NA	NA
50 x 50 x 3.2	4.66	337	0.28	0.89	NA	NA
50 x 50 x 3	4.39	358	0.33	0.92	NA	NA
50 x 50 x 2.5	3.71	423	0.46	1.03	NA	NA
40 x 40 x 5	5.4	233	0.12	0.57	NA	NA
40 x 40 x 4	4.46	282	0.14	0.64	NA	NA
40 x 40 x 3.2	3.66	343	0.24	0.71	NA	NA
40 x 40 x 3	3.45	364	0.27	0.75	NA	NA
40 x 40 x 2.5	2.92	430	0.38	0.75	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.
Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED RECTANGULAR HOLLOW SECTIONS COLUMNS: CRITICAL TEMP. 522°C Continued on opposite page

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
500 x 300 x 20	237	53	1.19	4.04	7.37	NA
500 x 300 x 16	192	65	1.19	4.04	7.37	NA
500 x 300 x 12.5	152	83	1.19	4.04	7.49	NA
500 x 300 x 10	122	103	1.19	4.04	7.73	NA
500 x 200 x 16	167	66	1.04	3.54	6.55	NA
500 x 200 x 12.5	132	83	1.04	3.54	6.55	NA
500 x 200 x 10	106	104	1.04	3.54	6.76	NA
500 x 200 x 8	85.7	128	1.04	3.74	7.07	NA
450 x 250 x 16	167	66	1.04	3.54	6.55	NA
450 x 250 x 12.5	132	83	1.04	3.54	6.55	NA
450 x 250 x 10	106	104	1.04	3.54	6.76	NA
450 x 250 x 8	85.7	128	1.04	3.74	7.07	NA
400 x 200 x 16	142	66	0.89	3.03	5.62	NA
400 x 200 x 12.5	112	84	0.89	3.03	5.62	NA
400 x 200 x 10	90.7	104	0.89	3.03	5.80	NA
400 x 200 x 8	73.1	129	0.89	3.21	6.06	NA
300 x 200 x 16	117	67	0.74	2.53	4.68	NA
300 x 200 x 12	92.6	85	0.74	2.53	4.68	NA
300 x 200 x 10	75	105	0.74	2.53	4.83	NA
300 x 200 x 8	60.5	130	0.74	2.67	5.05	NA
300 x 200 x 6.3	48.1	163	0.74	2.97	NA	NA
250 x 150 x 16	91.5	69	0.59	2.02	3.74	NA
250 x 150 x 12.5	73	86	0.59	2.02	3.74	NA
250 x 150 x 10	59.3	106	0.59	2.02	3.92	NA
250 x 150 x 8	48	131	0.59	2.20	4.04	NA
250 x 150 x 6.3	38.2	164	0.59	2.38	NA	NA
250 x 150 x 5	30.5	206	0.59	2.67	NA	NA
200 x 120 x 12.5	57.3	101	0.55	1.87	3.57	NA
200 x 120 x 10	46.7	124	0.55	1.92	3.68	NA
200 x 120 x 8	37.9	153	0.55	2.14	3.90	NA
200 x 120 x 6.3	30.3	192	0.55	2.36	NA	NA
200 x 120 x 5	24.2	240	0.55	2.64	NA	NA
200 x 100 x 16	66.4	71	0.45	1.52	2.81	NA
200 x 100 x 12.5	53.4	88	0.45	1.52	2.81	NA
200 x 100 x 10	43.6	108	0.45	1.52	2.94	NA
200 x 100 x 8	35.4	133	0.45	1.65	3.03	NA
200 x 100 x 6.3	28.3	166	0.45	1.83	NA	NA
200 x 100 x 5	22.7	207	0.45	2.01	NA	NA
160 x 80 x 12.5	41.6	90	0.36	1.21	2.25	NA
160 x 80 x 10	34.2	110	0.36	1.21	2.35	NA
160 x 80 x 8	27.9	135	0.36	1.32	2.42	NA
160 x 80 x 6.3	22.3	169	0.36	1.46	NA	NA
160 x 80 x 5	18	209	0.36	1.60	NA	NA
150 x 100 x 12.5	43.6	90	0.37	1.26	2.34	NA
150 x 100 x 10	35.7	110	0.37	1.26	2.45	NA
150 x 100 x 8	29.1	135	0.37	1.37	2.53	NA
150 x 100 x 6.3	23.3	168	0.37	1.52	NA	NA
150 x 100 x 5	18.7	210	0.37	1.67	NA	NA
120 x 80 x 10	27.9	113	0.30	1.01	1.96	NA
120 x 80 x 8	22.9	137	0.30	1.10	2.05	NA
120 x 80 x 6.3	18.4	171	0.30	1.22	NA	NA
120 x 80 x 5	14.8	212	0.30	1.37	NA	NA
120 x 60 x 8	20.4	139	0.27	0.99	1.85	NA
120 x 60 x 6.3	16.4	172	0.27	1.10	NA	NA
120 x 60 x 5	13.3	212	0.27	1.23	NA	NA
120 x 60 x 3.6	9.72	291	0.35	1.47	NA	NA
100 x 60 x 8	17.8	141	0.24	0.90	1.64	NA
100 x 60 x 6.3	14.4	174	0.24	0.97	NA	NA
100 x 60 x 5	11.7	215	0.24	1.09	NA	NA
100 x 60 x 3.6	8.59	292	0.31	1.31	NA	NA
100 x 60 x 3	7.22	348	0.50	1.45	NA	NA
100 x 50 x 8	16.6	142	0.22	0.85	1.54	NA
100 x 50 x 6.3	13.4	176	0.22	0.94	NA	NA
100 x 50 x 5	10.9	216	0.22	1.03	NA	NA
100 x 50 x 4	8.86	266	0.22	1.16	NA	NA
100 x 50 x 3.2	7.18	328	0.40	1.32	NA	NA
100 x 50 x 3	6.75	349	0.47	1.36	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

4-SIDED RECTANGULAR HOLLOW SECTIONS COLUMNS: CRITICAL TEMP. 522°C Continued from opposite page

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
90 x 50 x 8	15.3	144	0.21	0.79	1.44	NA
90 x 50 x 6.3	12.5	176	0.21	0.87	NA	NA
90 x 50 x 5	10.1	218	0.21	0.96	NA	NA
90 x 50 x 3.6	7.46	295	0.27	1.14	NA	NA
90 x 50 x 3	6.28	350	0.44	1.27	NA	NA
80 x 40 x 8	12.8	147	0.18	0.68	1.25	NA
80 x 40 x 6.3	10.5	179	0.18	0.75	NA	NA
80 x 40 x 5	8.54	221	0.18	0.84	NA	NA
80 x 40 x 4	6.97	270	0.18	0.93	NA	NA
80 x 40 x 3.2	5.67	332	0.34	1.05	NA	NA
80 x 40 x 3	5.34	353	0.39	1.11	NA	NA
60 x 40 x 6.3	8.49	185	0.15	0.62	NA	NA
60 x 40 x 5	6.97	225	0.15	0.70	NA	NA
60 x 40 x 4	5.72	274	0.16	0.77	NA	NA
60 x 40 x 3.2	4.66	337	0.28	0.89	NA	NA
60 x 40 x 3	4.39	358	0.33	0.92	NA	NA
60 x 40 x 2.5	3.71	423	0.46	1.03	NA	NA
50 x 30 x 5	5.4	233	0.12	0.57	NA	NA
50 x 30 x 4	4.46	282	0.14	0.64	NA	NA
50 x 30 x 3.2	3.66	343	0.24	0.71	NA	NA
50 x 30 x 3	3.45	364	0.27	0.75	NA	NA
50 x 30 x 2.5	2.92	430	0.38	0.83	NA	NA

CIRCULAR HOLLOW SECTIONS: CRITICAL TEMP. 522°C Continued on next page

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
508	565	22	1.19	4.03	7.35	NA
508	462	27	1.19	4.03	7.35	NA
508	376	33	1.19	4.03	7.35	NA
508	298	42	1.19	4.03	7.35	NA
508	241	52	1.19	4.03	7.35	NA
508	194	65	1.19	4.03	7.35	NA
508	153	82	1.19	4.03	7.47	NA
508	123	102	1.19	4.03	7.71	NA
457	411	27	1.07	3.63	6.61	NA
457	335	34	1.07	3.63	6.61	NA
457	266	42	1.07	3.63	6.61	NA
457	216	52	1.07	3.63	6.61	NA
457	174	65	1.07	3.63	6.61	NA
457	137	82	1.07	3.63	6.72	NA
457	110	102	1.07	3.63	6.93	NA
406.4	295	34	0.95	3.23	5.88	NA
406.4	235	43	0.95	3.23	5.88	NA
406.4	191	52	0.95	3.23	5.88	NA
406.4	154	65	0.95	3.23	5.88	NA
406.4	121	83	0.95	3.23	5.98	NA
406.4	97.8	102	0.95	3.23	6.17	NA
355.6	204	43	0.83	2.82	5.15	NA
355.6	166	53	0.83	2.82	5.15	NA
355.6	134	65	0.83	2.82	5.15	NA
355.6	106	83	0.83	2.82	5.23	NA
355.6	85.2	103	0.83	2.82	5.40	NA
355.6	68.6	128	0.83	2.99	5.64	NA
323.9	184	43	0.76	2.57	4.69	NA
323.9	150	53	0.76	2.57	4.69	NA
323.9	121	66	0.76	2.57	4.76	NA
323.9	96	83	0.76	2.57	4.76	NA
323.9	77.4	103	0.76	2.57	4.91	NA
323.9	62.3	128	0.76	2.72	5.14	NA
323.9	49.3	162	0.76	3.02	NA	NA
273	153	44	0.64	2.17	3.95	NA
273	125	54	0.64	2.17	3.95	NA
273	101	67	0.64	2.17	4.01	NA
273	80.3	84	0.64	2.17	4.01	NA
273	64.9	104	0.64	2.17	4.14	NA
273	52.3	129	0.64	2.29	4.33	NA
273	41.4	163	0.64	2.55	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.
Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

CIRCULAR HOLLOW SECTIONS: CRITICAL TEMP. 522°C Continued from previous page

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
244.5	135	45	0.57	1.94	3.54	NA
244.5	111	54	0.57	1.94	3.54	NA
244.5	90.2	67	0.57	1.94	3.60	NA
244.5	71.5	84	0.57	1.94	3.60	NA
244.5	57.8	104	0.57	1.94	3.71	NA
244.5	46.7	129	0.57	2.05	3.88	NA
244.5	37	163	0.57	2.28	NA	NA
219.1	98.2	55	0.51	1.74	3.17	NA
219.1	80.1	67	0.51	1.74	3.22	NA
219.1	63.7	85	0.51	1.74	3.22	NA
219.1	51.6	105	0.51	1.74	NA	NA
219.1	41.6	130	0.51	1.84	3.48	NA
219.1	33.1	163	0.51	2.05	NA	NA
219.1	26.4	205	0.51	2.30	NA	NA
193.7	70.1	68	0.45	1.54	2.85	NA
193.7	55.9	85	0.45	1.54	2.85	NA
193.7	45.3	105	0.45	1.54	2.94	NA
193.7	36.6	131	0.45	1.67	NA	NA
193.7	29.1	164	0.45	1.81	NA	NA
193.7	23.3	205	0.45	2.03	NA	NA
168.3	39	106	0.39	1.34	2.59	NA
168.3	31.6	131	0.39	1.45	2.67	NA
168.3	25.2	165	0.39	1.57	NA	NA
168.3	20.1	207	0.39	1.77	NA	NA
139.7	32	108	0.33	1.11	2.15	NA
139.7	26	133	0.33	1.21	2.22	NA
139.7	20.7	166	0.33	1.34	NA	NA
139.7	16.6	208	0.33	1.47	NA	NA
114.3	16.8	168	0.27	1.09	NA	NA
114.3	13.5	209	0.27	1.20	NA	NA
114.3	9.83	287	0.32	1.44	NA	NA
88.9	10.3	213	0.21	0.95	NA	NA
88.9	8.38	262	0.21	1.06	NA	NA
88.9	6.76	324	0.37	1.20	NA	NA
76.1	8.77	214	0.18	0.82	NA	NA
76.1	7.11	264	0.18	0.91	NA	NA
76.1	5.75	326	0.32	1.05	NA	NA
60.3	6.82	218	0.14	0.65	NA	NA
60.3	5.55	268	0.14	0.73	NA	NA
60.3	4.51	330	0.25	0.83	NA	NA
48.3	5.34	223	0.11	0.53	NA	NA
48.3	4.37	273	0.12	0.59	NA	NA
48.3	3.56	335	0.21	0.67	NA	NA
42.4	3.79	276	0.11	0.52	NA	NA
42.4	3.09	338	0.19	0.59	NA	NA
42.4	2.55	410	0.29	0.67	NA	NA
33.7	2.93	284	0.09	0.42	NA	NA
33.7	2.41	345	0.16	0.47	NA	NA
33.7	1.99	418	0.24	0.54	NA	NA
26.9	1.87	355	0.14	0.39	NA	NA
21.3	1.43	367	0.12	0.31	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED JOISTS (COMPOSITE SLAB): CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
254 x 203	81.85	107	0.42	0.91	3.99	NA	127	0.49	1.77	4.51	NA
254 x 114	37.20	180	0.32	1.07	4.24	NA	204	0.36	2.08	5.31	NA
203 x 152	52.09	130	0.32	0.83	3.46	NA	153	0.38	1.66	4.23	NA
203 x 102	25.33	220	0.26	1.11	NA	NA	252	0.48	2.36	NA	NA
178 x 102	21.54	241	0.25	1.13	NA	NA	278	0.51	2.60	NA	NA
152 x 127	37.20	145	0.25	0.71	2.96	NA	172	0.30	1.51	3.80	NA
152 x 89	17.09	263	0.21	1.06	NA	NA	303	0.49	2.65	NA	NA
152 x 76	17.86	234	0.20	0.87	NA	NA	268	0.36	1.95	NA	NA
127 x 114	29.76	157	0.22	0.71	2.75	NA	188	0.26	1.43	3.65	NA
127 x 114	26.79	175	0.22	0.75	2.88	NA	208	0.26	1.59	4.02	NA
127 x 76	16.37	231	0.18	0.79	NA	NA	268	0.33	1.79	NA	NA
127 x 76	13.36	284	0.18	0.97	NA	NA	328	0.50	2.53	NA	NA
114 x 114	26.79	167	0.21	0.68	2.72	NA	201	0.25	1.48	3.77	NA
102 x 102	23.07	173	0.19	0.64	2.45	NA	207	0.23	1.36	3.44	NA
102 x 64	9.65	320	0.18	0.88	NA	NA	372	NA	NA	NA	NA
102 x 44	7.44	355	NA	NA	NA	NA	402	NA	NA	NA	NA
89 x 89	19.35	180	0.17	0.56	2.21	NA	216	0.24	1.23	NA	NA
76 x 76	14.67	210	0.15	0.58	NA	NA	253	0.28	1.37	NA	NA
76 x 76	12.65	236	0.14	0.65	NA	NA	284	0.31	1.63	NA	NA



TYPE 1



TYPE 2



TYPE 3

3-SIDED TAPERED FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 1

Section	Weight/M	2A + 3B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M	A + 4B Hp/A	FRL 30/-/ Lt/M	FRL 60/-/ Lt/M	FRL 90/-/ Lt/M	FRL 120/-/ Lt/M
432 x 102	65.54	140	0.31	0.87	3.49	NA	100	0.31	0.62	2.80	NA
381 x 102	55.10	152	0.29	0.88	3.51	NA	112	0.29	0.64	2.92	NA
305 x 102	46.18	155	0.26	0.79	3.17	NA	121	0.26	0.63	2.75	NA
305 x 89	41.69	165	0.25	0.79	3.09	NA	124	0.25	0.59	2.55	NA
254 x 89	35.74	170	0.23	0.72	2.90	NA	134	0.23	0.59	2.49	NA
254 x 76	28.29	204	0.21	0.83	NA	NA	155	0.21	0.62	2.49	NA
229 x 89	32.76	173	0.22	0.74	2.82	NA	140	0.22	0.61	2.43	NA
229 x 76	26.06	207	0.20	0.79	NA	NA	161	0.20	0.63	2.50	NA
203 x 89	29.78	177	0.21	0.71	2.78	NA	147	0.21	0.62	2.45	NA
203 x 76	23.82	209	0.19	0.75	NA	NA	167	0.19	0.60	2.42	NA
178 x 89	26.81	182	0.20	0.71	2.69	NA	156	0.20	0.63	2.46	NA
178 x 76	20.84	220	0.18	0.75	NA	NA	182	0.18	0.65	2.44	NA
152 x 89	23.84	188	0.19	0.68	NA	NA	167	0.19	0.60	2.42	NA
152 x 76	17.88	234	0.17	0.75	NA	NA	201	0.17	0.68	NA	NA
127 x 64	14.90	234	0.14	0.62	NA	NA	201	0.14	0.57	NA	NA
102 x 51	10.42	268	0.11	0.59	NA	NA	230	0.11	0.50	NA	NA
76 x 38	6.70	312	0.10	0.51	NA	NA	268	0.08	0.44	NA	NA

TYPE 2 Cont d on opposite page

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED TAPERED FLANGE CHANNELS (COMPOSITE SLAB): CRITICAL TEMP. 620°C / TYPE 3 Cont d frm opposite page

Section	Weight/M	A + 2B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
432 x 102	65.54	76	0.24	0.38	1.89	NA
381 x 102	55.10	83	0.22	0.39	1.78	NA
305 x 102	46.18	86	0.19	0.34	1.62	NA
305 x 89	41.69	91	0.18	0.32	1.58	NA
254 x 89	35.74	95	0.16	0.29	1.41	NA
254 x 76	28.29	113	0.15	0.33	1.51	NA
229 x 89	32.76	97	0.15	0.30	1.36	NA
229 x 76	26.06	115	0.14	0.31	1.42	NA
203 x 89	29.78	100	0.14	0.28	1.27	NA
203 x 76	23.82	117	0.13	0.32	1.35	NA
178 x 89	26.81	104	0.13	0.26	1.24	NA
178 x 76	20.84	124	0.12	0.29	1.28	NA
152 x 89	23.84	109	0.12	0.27	1.18	NA
152 x 76	17.88	134	0.11	0.29	1.25	NA
127 x 64	14.90	134	0.09	0.25	1.04	NA
102 x 51	10.42	153	0.08	0.23	0.91	NA
76 x 38	6.70	179	0.06	0.19	0.76	NA

4-SIDED TAPERED FLANGE CHANNELS: CRITICAL TEMP. 550°C

Section	Weight/M	2A + 4B Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
432 x 102	65.54	152	0.47	2.08	5.28	NA
381 x 102	55.10	166	0.43	2.08	5.38	NA
305 x 102	46.18	173	0.38	1.89	4.76	NA
305 x 89	41.69	182	0.36	1.86	4.88	NA
254 x 89	35.74	190	0.32	1.73	4.43	NA
254 x 76	28.29	226	0.36	1.99	NA	NA
229 x 89	32.76	195	0.30	1.69	4.29	NA
229 x 76	26.06	230	0.34	1.87	NA	NA
203 x 89	29.78	201	0.28	1.64	4.19	NA
203 x 76	23.82	234	0.32	1.80	NA	NA
178 x 89	26.81	208	0.26	1.59	4.02	NA
178 x 76	20.84	249	0.34	1.82	NA	NA
152 x 89	23.84	217	0.29	1.52	NA	NA
152 x 76	17.88	268	0.36	1.95	NA	NA
127 x 64	14.90	268	0.30	1.62	NA	NA
102 x 51	10.42	306	0.33	1.66	NA	NA
76 x 38	6.70	357	NA	NA	NA	NA

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED EQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

4-SIDED EQUAL ANGLES: CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
200 x 200 x 24	71.10	66	0.22	0.31	1.60	NA	88	0.30	0.71	2.02	NA
200 x 200 x 20	59.90	79	0.22	0.36	1.78	NA	105	0.30	0.83	2.14	NA
200 x 200 x 18	54.20	87	0.22	0.40	1.92	NA	116	0.30	0.95	2.50	NA
200 x 200 x 16	48.50	97	0.22	0.45	2.01	NA	129	0.30	1.07	2.73	NA
150 x 150 x 18	40.10	88	0.17	0.30	1.44	NA	117	0.22	0.71	1.87	NA
150 x 150 x 15	33.80	105	0.17	0.33	1.57	NA	139	0.22	0.85	2.23	NA
150 x 150 x 12	27.30	129	0.17	0.43	1.81	NA	173	0.22	1.11	2.81	NA
150 x 150 x 10	23.00	154	0.17	0.50	2.01	NA	205	0.22	1.29	3.30	NA
120 x 120 x 15	26.60	106	0.13	0.29	1.28	NA	142	0.18	0.71	1.85	NA
120 x 120 x 12	21.60	131	0.13	0.35	1.47	NA	174	0.18	0.89	2.25	NA
120 x 120 x 10	18.20	155	0.13	0.40	1.60	NA	207	0.18	1.07	2.71	NA
120 x 120 x 8	14.70	192	0.13	0.51	NA	NA	256	0.29	1.43	NA	NA
100 x 100 x 15	21.90	108	0.11	0.25	1.07	NA	143	0.15	0.59	1.55	NA
100 x 100 x 12	17.80	132	0.11	0.29	1.23	NA	176	0.15	0.74	1.96	NA
100 x 100 x 8	12.20	193	0.11	0.42	NA	NA	257	0.24	1.19	NA	NA
90 x 90 x 12	15.90	133	0.10	0.26	1.10	NA	178	0.13	0.67	1.77	NA
90 x 90 x 10	13.40	158	0.10	0.32	1.24	NA	211	0.13	0.83	NA	NA
90 x 90 x 8	10.90	194	0.10	0.38	NA	NA	259	0.21	1.12	NA	NA
90 x 90 x 6	8.30	255	0.10	0.48	NA	NA	340	NA	NA	NA	NA
80 x 80 x 10	11.90	158	0.09	0.29	1.11	NA	211	0.12	0.74	NA	NA
80 x 80 x 8	9.63	196	0.09	0.34	NA	NA	261	0.19	1.00	NA	NA
80 x 80 x 6	7.34	257	0.09	0.45	NA	NA	342	NA	NA	NA	NA
70 x 70 x 10	10.30	160	0.08	0.25	0.97	NA	213	0.10	0.64	NA	NA
70 x 70 x 8	8.36	197	0.08	0.30	NA	NA	263	0.17	0.87	NA	NA
70 x 70 x 6	6.38	258	0.08	0.39	NA	NA	345	NA	NA	NA	NA
60 x 60 x 10	8.69	163	0.07	0.21	0.84	NA	217	0.11	0.55	NA	NA
60 x 60 x 8	7.09	199	0.07	0.25	NA	NA	266	0.14	0.77	NA	NA
60 x 60 x 6	5.42	261	0.07	0.33	NA	NA	348	NA	NA	NA	NA
60 x 60 x 5	4.57	309	0.08	0.39	NA	NA	412	NA	NA	NA	NA
50 x 50 x 8	5.82	202	0.06	0.22	NA	NA	270	0.12	0.64	NA	NA
50 x 50 x 6	4.47	263	0.06	0.28	NA	NA	351	NA	NA	NA	NA
50 x 50 x 5	3.77	312	0.07	0.33	NA	NA	416	NA	NA	NA	NA
45 x 45 x 6	4.00	265	0.05	0.25	NA	NA	353	NA	NA	NA	NA
45 x 45 x 5	3.38	314	0.06	0.30	NA	NA	418	NA	NA	NA	NA
45 x 45 x 4	2.74	387	NA	NA	NA	NA	516	NA	NA	NA	NA
40 x 40 x 6	3.52	268	0.04	0.23	NA	NA	357	NA	0.74	NA	NA
40 x 40 x 5	2.97	317	0.05	0.27	NA	NA	423	NA	0.82	NA	NA
40 x 40 x 4	2.42	389	NA	NA	NA	NA	519	NA	NA	NA	NA
25 x 25 x 5	1.77	333	NA	NA	NA	NA	444	NA	NA	NA	NA
25 x 25 x 4	1.45	406	NA	NA	NA	NA	541	NA	NA	NA	NA
25 x 25 x 3	1.11	530	NA	NA	NA	NA	707	NA	NA	NA	NA

6.4 PROMAPAIN® -H: British Standard Steel Sections (litres per linear meter)

Hp/A and paint quantities required to provide the relevant period of fire resistance in accordance with the criteria of BS 476: Part 21: 1987 or AS 1530: Part 4: 1997.

3-SIDED UNEQUAL ANGLES (COMPOSITE SLAB): CRITICAL TEMP. 620°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
200 x 150 x 18	47.10	92	0.20	0.37	1.80	NA
200 x 150 x 15	39.60	109	0.20	0.45	1.96	NA
200 x 150 x 12	32.00	135	0.20	0.53	2.25	NA
200 x 100 x 15	33.70	116	0.19	0.45	1.89	NA
200 x 100 x 12	27.30	144	0.19	0.52	2.15	NA
200 x 100 x 10	23.00	171	0.19	0.63	2.41	NA
150 x 90 x 15	26.60	115	0.14	0.32	1.45	NA
150 x 90 x 12	21.60	142	0.14	0.41	1.68	NA
150 x 90 x 10	18.20	168	0.14	0.46	1.85	NA
150 x 75 x 15	24.80	119	0.14	0.33	1.42	NA
150 x 75 x 12	20.20	146	0.14	0.42	1.64	NA
150 x 75 x 10	17.00	173	0.14	0.47	1.81	NA
125 x 75 x 12	17.80	143	0.12	0.34	1.40	NA
125 x 75 x 10	15.00	170	0.12	0.39	1.55	NA
125 x 75 x 8	12.20	209	0.12	0.48	NA	NA
100 x 75 x 12	15.40	140	0.10	0.29	1.14	NA
100 x 75 x 10	13.00	166	0.10	0.33	1.29	NA
100 x 75 x 8	10.60	204	0.10	0.41	NA	NA
100 x 65 x 10	12.30	169	0.10	0.32	1.26	NA
100 x 65 x 8	9.94	209	0.10	0.39	NA	NA
100 x 65 x 7	8.77	237	0.10	0.45	NA	NA
80 x 60 x 8	8.34	207	0.08	0.33	NA	NA
80 x 60 x 7	7.36	235	0.08	0.36	NA	NA
80 x 60 x 6	6.37	271	0.08	0.42	NA	NA
75 x 50 x 8	7.39	212	0.07	0.31	NA	NA
75 x 50 x 6	5.65	278	0.07	0.40	NA	NA
65 x 50 x 8	6.75	209	0.07	0.27	NA	NA
65 x 50 x 6	5.16	274	0.07	0.35	NA	NA
65 x 50 x 5	4.35	325	0.09	0.41	NA	NA

4-SIDED UNEQUAL ANGLES: CRITICAL TEMP. 550°C

Section	Weight/M	Hp/A	FRL 30/-/- Lt/M	FRL 60/-/- Lt/M	FRL 90/-/- Lt/M	FRL 120/-/- Lt/M
200 x 150 x 18	47.10	117	0.26	0.83	2.18	NA
200 x 150 x 15	39.60	139	0.26	0.99	2.60	NA
200 x 150 x 12	32.00	172	0.26	1.30	3.28	NA
200 x 100 x 15	33.70	140	0.22	0.85	2.23	NA
200 x 100 x 12	27.30	173	0.22	1.11	2.81	NA
200 x 100 x 10	23.00	205	0.22	1.29	3.30	NA
150 x 90 x 15	26.60	142	0.18	0.71	1.85	NA
150 x 90 x 12	21.60	174	0.18	0.89	2.25	NA
150 x 90 x 10	18.20	207	0.18	1.07	2.71	NA
150 x 75 x 15	24.80	142	0.17	0.67	1.74	NA
150 x 75 x 12	20.20	175	0.17	0.84	2.11	NA
150 x 75 x 10	17.00	208	0.17	1.00	2.54	NA
125 x 75 x 12	17.80	176	0.15	0.74	1.96	NA
125 x 75 x 10	15.00	209	0.15	0.89	2.26	NA
125 x 75 x 8	12.20	257	0.24	1.19	NA	NA
100 x 75 x 12	15.40	178	0.13	0.65	1.72	NA
100 x 75 x 10	13.00	211	0.13	0.81	NA	NA
100 x 75 x 8	10.60	259	0.21	1.04	NA	NA
100 x 65 x 10	12.30	211	0.12	0.76	NA	NA
100 x 65 x 8	9.94	261	0.20	1.03	NA	NA
100 x 65 x 7	8.77	295	0.25	1.25	NA	NA
80 x 60 x 8	8.34	264	0.17	0.87	NA	NA
80 x 60 x 7	7.36	299	0.21	1.08	NA	NA
80 x 60 x 6	6.37	345	NA	NA	NA	NA
75 x 50 x 8	7.39	266	0.15	0.80	NA	NA
75 x 50 x 6	5.65	347	NA	NA	NA	NA
65 x 50 x 8	6.75	267	0.14	0.73	NA	NA
65 x 50 x 6	5.16	350	NA	NA	NA	NA
65 x 50 x 5	4.35	415	NA	NA	NA	NA

FRL = Fire resistance level Lt/M = Litres per linear metre NA = Not applicable For other failure temperature criteria please contact Promat or check CD.

Usage is theoretical and does not include waste and will vary depending upon the section size, application method, applicator and site conditions.

7. COMPACT DISC

CHECK OUT THE BELOW COMPACT DISC TODAY FOR THE INTERACTIVE CONTENTS.



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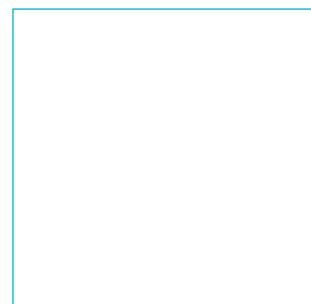
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