

Interchar 3120 Application Guidelines

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The information in this guideline is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this guideline without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this guideline or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. THEREFORE, UNLESS WE SPECIFICALLY AGREE IN WRITING TO DO SO, WE DO NOT ACCEPT ANY LIABILITY AT ALL FOR THE PERFORMANCE OF THE PRODUCT OR FOR (SUBJECT TO THE MAXIMUM EXTENT PERMITTED BY LAW) ANY LOSS OR DAMAGE ARISING OUT OF THE USE OF THE PRODUCT. WE HEREBY DISCLAIM ANY WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this guideline is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local International Paint representative that this guideline is current prior to using the product.

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The International Paint Application Guidelines have been produced and revised in line with the Global Protective Coatings Product Range. The purpose of the guidelines is to ensure that the product, as applied, provides the required level of durability.

Successful in-service performance of a coating system depends upon both the correct choice of product(s) and the adoption of the correct guidelines for surface preparation and paint application.

The responsibilities for achieving the specific standards outlined, and for carrying out surface preparation and paint application, rest with the Contracting Company. Under no circumstances do these responsibilities rest with International Paint. We will generally provide for the presence of a Technical Service Representative at key stages during the performance of the contract. The role of the International Paint Technical Service Representative is advisory only unless otherwise specified in the terms and conditions of the contract. The information contained herein presents guidelines for the application of Interchar 3120 to correctly prepared surfaces.

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1. INTRODUCTION

Interchar 3120 is a two-pack solvent-free intumescent coating designed to provide up to 120 minutes fire protection to structural steelwork.

Interchar 3120 has been tested, assessed and certified in accordance with a range of standards, details of which can be found on the relevant technical data sheets or by contacting International Paint

This guideline **DOES NOT** cover Interchar 212.

Reference throughout this procedure is made to the UK document **Structural Fire Design: Off-Site Applied Thin Film Intumescent Coatings (ref. SCI P160, Second Edition)**, from the Steel Construction Institute.

It is recommended that reference should also be made to the **European Industry Best Practice Guide on the Application of Intumescent Coatings to Constructional Steel**, available via www.cepe.org.

It is the applicator's responsibility to ensure that all coatings are applied in accordance with these working procedures and that the specified dry film thickness is achieved. International Protective Coatings Technical Service is available to assist the applicator and is provided subject to our standard conditions of sale.

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2. WHERE TO APPLY INTERCHAR 3120

Interchar 3120 can be used to provide fire protection on structural steel sections such as beams, columns and hollow sections.

Subject to specific country approvals, Interchar 3120 can be specified for structural beams, columns, hollow sections and cellular beams.

Consult International Protective Coatings for the latest information on approvals and testing.

Interchar 3120 can be specified for internal environments or external environments such as those described in ISO 12944 C1 to C5 corrosive categories and EN16623 / EAD-350402-00-1106 (ETAG018-2) Type Z₂ to X environments. Refer to Section 4 for more details.

Interchar 3120 is suitable for off-site application in the steel fabrication shop, as well as on-site application to existing buildings or those under construction.

Interchar 3120 can be used over a range of approved priming systems, and overcoated with a range of approved top coats; refer to Sections 6 and 7 for more details. Only qualified primers and topcoats can be used.

An Interchar 3120 fire protection specification typically requires the following:

- **Surface Preparation:** To provide optimum adhesion for the primer and Interchar 3120 to the substrate to ensure sufficient adhesion for the developing char under a fire scenario.
- **Priming System:** To provide anti-corrosive protection to the steelwork.
- **Interchar Product:** The intumescent coating reacts to heat by rapidly swelling to produce a carbonaceous char which acts as an insulating layer between the steelwork and the elevated temperature of the environment.

The dry film thickness of Interchar 3120 to be applied will vary depending on the size and configuration of the individual steel sections along with the desired period of fire protection required. Dry film thickness figures for Interchar 3120 are available from International Protective Coatings.

- **Top Coat:** Also known as sealer coats or finish coats, to protect Interchar 3120 from UV and moisture, provide a decorative cosmetic finish, and reduce dirt and dust retention. In certain circumstances and environments the top coat can be omitted. See Section 7.

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3. STORAGE OF MATERIAL

Interchar 3120 should be stored in dry, shaded conditions away from sources of heat and ignition. Recommended storage conditions are between 5°C and 35°C (41-95°F). For optimum application characteristics, Interchar 3120 should be stored at minimum 15°C (59°F) storage temperatures for 24 hours prior to use.

The shelf life of Interchar 3120 at 25°C (77°F) is 6 months from date of manufacture, subject to re-inspection thereafter. Containers should remain unopened until needed and used in date order. Shelf life may be reduced if product is stored outside the recommended storage temperatures.

4. ENVIRONMENTAL CONDITIONS FOR APPLICATION

Interchar 3120 may be applied at steel temperatures between +5°C and +40°C (41 – 104°F). For optimum application and drying, steel and air temperatures should be above 10°C.

The surface must be dry and the surface temperature must always be a minimum of 3°C (5°F) above the dew point. The maximum acceptable relative humidity during application is 85%.

For maximum performance ambient curing temperatures should be above 10°C.

Do not apply when environmental conditions are deteriorating; that is when air temperature is likely to fall below 10°C within the succeeding 2 hours and dew point is falling such that condensation is likely to form on surfaces to be coated.

Interchar 3120 hardening will slow at 10°C and below and it will not cure adequately at temperatures below 5°C.

Any supplemental heating used within a fabrication shop should provide the required air/steel temperature rather than direct heat on to the coating itself. Careful selection of heating method is needed, as some types of heating equipment such as propane fuelled space heaters can increase the humidity in the workplace and thus affect the applied coating film.

The area where Interchar 3120 is applied should be well ventilated. Any build-up of solvent vapour in the surrounding area will retard the drying of the coating. Interchar 3120 must be protected from condensation and water during application and the early stages of drying.

Interchar 3120 has improved water resistance and mechanical resistance compared to traditional single pack intumescent coatings and can be applied either offsite or onsite without a requirement for topcoating.

It can be exposed to prevailing weather conditions after a short drying period and after full cure will resist extended exposure to pooling or running water, driving rain, high humidity and prolonged condensation as generally encountered on construction sites.

Interchar 3120 is resistant to general atmospheric conditions up to and including C5, as described in ISO 12944-2 and category type X as described in EN16623.

Topcoating of Interchar 3120 is not a requirement but is advised when the service environment is more aggressive than ISO12944-2 C3 during the lifetime of the building or Type X as defined in EN16623 or when the coating is likely to be exposed to higher levels of UV.

Please consult International Protective Coatings for enquiries on specific topcoat details.

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5. SURFACE PREPARATION

Interchar 3120 may be applied over a variety of ferrous substrates but in the majority of cases this will be a primed steel surface.

Primed Steel

The steel surface should first be assessed and treated in accordance with ISO 8504-2000. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning. The steel should then be abrasive blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6. If oxidation has occurred between blasting and application of the primer system the surface should be re-blasted to the specified visual standard.

The blast profile appropriate for the choice of primer should be achieved. Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

Primer Surface Preparation

The primer surface should be dry and free from all contamination and the Interchar 3120 must be applied within the overcoating intervals specified (consult the relevant primer product data sheet).

Areas of breakdown, damage etc., should be prepared to the specified standard (e.g. Sa2½ (ISO 8501-1:2007) or SSPC SP6, Abrasive Blasting, or SSPC SP11, Power Tool Cleaning for small areas) and patch primed prior to the application of the Interchar 3120.

Should the primer's suitability for overcoating be in doubt in any way, for example, primer type unknown, primer not approved, excessive dry film thickness, surface contamination, surface glossiness etc, International Protective Coatings MUST be consulted prior to the application of the Interchar 3120.

Blasted Steel

For some service environments Interchar 3120 may be applied directly to a blasted steel surface. The steel surface should first be assessed and treated in accordance with ISO 8504-2000. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning. The steel should then be abrasive blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6. If oxidation has occurred between blasting and application of the Interchar 3120 the surface should be re-blasted to the specified visual standard.

The blast profile achieved should be a minimum of 50 microns. Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

Black steel

For on-site application and where the final service environment will be C1 as defined in ISO 12944-2, Interchar 3120 may be applied directly to black steel. The condition of the black steel should be no worse than Grade A as defined in ISO8501-1:2007. All oil and grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Rusty steel

For on-site application and where the final service environment will be C1 as defined in ISO 12944-2, Interchar 3120 may be applied directly to oxidised blasted steel. The condition of the steel should be no worse than moderate flash-rusting as per International Paint Hydroblasting Standard

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Galvanised steel

Surfaces should be prepared by sweep abrasive blasting to provide a roughened surface, to a standard similar to Sa1 (ISO 8501-1), SSPC-SP7 or NACE No. 4. Typically a profile of 12-25 microns (0.6-1.0 mils) is achieved by sweep blasting. A qualified primer e.g. Intergard 269 should be applied after sweep blasting.

6. PRIMERS AND OVERCOATING

Interchar 3120 has been tested as part of a coating system for use in fire situations. A list of the qualified primers can be found on the latest version of the Interchar 3120 Technical Data Sheet. For other suitable primers consult International Protective Coatings.

The technical parameters and recommendations of the specific primer, such as maximum and minimum overcoating times, must always be adhered to.

Typical primer dry film thickness recommended is between 40 and 75 microns (1.5 – 3 mils) depending upon primer product.

The maximum mean recommended dry film thickness for the priming system is 200 microns (6 mils), depending on the primer product. Any restrictions on the maximum recommended DFT for the primer must be adhered to. If in doubt, contact International Protective Coatings.

7. TOPCOATS

Only topcoats qualified by International Protective Coatings should be applied over Interchar products. A list of the qualified topcoats can be found on the latest version of the Interchar 3120 Technical Data Sheet. For other suitable topcoats consult International Protective Coatings.

Prior to the application of the topcoat, the applicator must ensure that the specified dry film thickness of Interchar 3120 has been achieved. The Interchar 3120 should be allowed to harden sufficiently so that thickness readings can be taken, i.e. the film should not be disturbed by the probe from an electronic DFT gauge.

The surface of the Interchar 3120 must be clean, dry and free from contamination before overcoating with the topcoat. The topcoat product must be applied within the overcoating intervals specified. Consult the Interchar 3120 product data sheet for specific details.

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8. AIRLESS SPRAY APPLICATION

Interchar 3120 is a high viscosity product supplied in two components that must be mixed in the correct ratio before application. Power stirring is essential to ensure that the coating is mixed to a uniform consistency.

Hand held air driven mixers are the most common and are ideal for this purpose, preferably with a helical style shaft. It is recommended that the Interchar 3120 components are stored at least overnight above 15°C immediately before use. Both parts A and B should be fully agitated before adding together - 4 to 5 minutes mixing of Part A is recommended followed by a further 4 to 5 minutes mixing of Part A and B together reaching all parts of a 20 litre pail. **Manual mixing (e.g. using a palette knife) of Interchar 3120 is not recommended.**

Airless Spray Application Equipment

Air-driven airless spray pumps with a ratio of at least 70:1 are preferred.

For air-driven airless spray pumps the following modifications to the normal set up are recommended:

- The lengths of wet end extension hoses should be kept to a minimum.
- Place the pail or drum so that condensation from the pump does not run into the coating.
- All filters should be removed from the pump, lines and gun. A coarse filter can be fitted over the wet end to prevent contamination from external sources from entering the spray machine and causing blockages.
- Use the minimum length of 10mm (3/8") bore high pressure fluid line (maximum 30 metres). A 2 metre long 6mm (1/4") bore whip end with a swivel connection to the spray gun makes the fluid lines much easier to handle and more maneuverable.
- The recommended airless spray tip range is 0.58-0.68mm (23-27 thou.)

Thinning

Interchar 3120 can be thinned up to 8% by volume. The level of thinning will depend upon a number of factors including ambient environmental conditions and target dry film thickness (detailed below). The recommended thinner is International GTA007.

Recommended Procedure

For optimum throughput of coated steelwork the following guidance is provided:

Dry Film Thickness up to 500 microns (20mils)

At paint and ambient temperatures below 25°C up to 8% thinner by volume (1400ml) may be added per 25kg kit of this product. Add the amount of thinner accurately and always thoroughly mix full kits when spraying. Spray-apply a single coat of Interchar 3120, as required, at the wet film thickness necessary to provide the target dry film thickness allowing for the thinner addition.

If thicker coats are applied, the drying and the handling time will be extended.

In tropical conditions above 25°C paint and ambient temperature thinner addition may not be necessary.

Dry Film Thickness greater than 500 microns (30mils) up to 2mm (80mils)

Where the specified dry film thickness of Interchar 3120 is between 500 microns (20mils) and 2mm (80mils), spray-apply a single coat of Interchar 3120 as required. Up to 5% thinner by volume (860ml) may be added per 25kg kit of this product. Add the amount of thinner accurately and always thoroughly mix full kits when spraying. Do not add more than 860ml of thinner for applied thicknesses greater than 500 microns per layer.

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Dry Film Thickness greater than 2mm (80mils)

Where the specified dry film thickness of Interchar 3120 is greater than 2mm (80mils), the total thickness should be built up in two or more layers. Up to a maximum of 8mm (320mils) dry film thickness can be achieved in one application using a staged approach by applying 4 x 2mm (80mils) layers wet on wet with 30-60 minutes interval between layers.

After 16 hours cure at 25°C further coats of 2mm (80mils) may be applied. Using this method up to 16mm dry film thickness can be applied in 2 days.

If staged application is not applicable / possible please refer to the TDS for overcoating times.

9. PLURAL COMPONENT SPRAY EQUIPMENT

Plural component equipment used to apply Interchar 3120 must be capable of delivering the required pressures, temperatures and flow rates. Gravity fed machines to spray Interchar 3120 are supplied by a number of companies such as the Graco XM50 and Wiwa Fleximix. Each supplier provides instructions on machine operation and maintenance and should be able to advise on the individual set up required to achieve best application qualities. This information is given for advice only and the contractor is responsible for determining the suitability of specific pieces of equipment and maintenance of the equipment in good working order according to the manufacturer's recommendations

- Do not thin the Interchar 3120
- Temperature of Part A and Part B to be maintained in the range of 50-60°C using heated storage tanks and/or in-line heaters
- Use of an insulated or heated paint line to maintain temperature at gun exit is recommended
- Gun exit temperature of 55°C ± 5°C is recommended
- Equipment to be set to deliver a Part A to Part B mix ratio of 2.55:1 by volume
- Use the minimum length of a 1/2" paint line (recommended 15 metres). A 5 metre long 6mm (1/4") bore whip end with a swivel connection to the spray gun makes the fluid lines much easier to handle and more maneuverable.
- The recommended airless spray tip range is 0.58-0.68mm (23-27 thou.)
- Recommended input pressure set to 80psi.

10. BRUSH AND ROLLER APPLICATION

Application of Interchar 3120 by brush is a suitable method but is generally recommended for small areas and repairs only. Roller application is **not** recommended. Between 250-400 microns (10-16mils) wet film thickness can be achieved per coat and multiple coats will be required. The appearance of brush applied Interchar products will be different to that of the spray applied coating.

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11. POT-LIFE

At 20°C working pot-life is 45 minutes At 40°C working pot-life is 30 minutes

As the end of the working pot-life is neared, indicators will include a loss of spray pattern, collapsing of the spray fan,

Do not add thinning solvent to the Interchar 3120 in an attempt to extend workability of the material beyond the times indicated above.

As the above working times are approached any unused material still retained in spray equipment, fluid lines, etc. should be thoroughly flushed out before it hardens and permanently damages the equipment.

Do not bulk mixed waste Interchar 3120 in large containers. As the material reacts and hardens, it will increase in temperature. If in bulk the increase in temperature will be exaggerated. Keep waste mixed Interchar 3120 in small containers of no more than 20 litres.

12. STANDARD OF COSMETIC FINISH

The cosmetic finish of Interchar 3120 will vary depending on the method of application. Spray application of the coating will give a superior appearance to brush application.

Particular requirements for the quality of the finish should be stated in the specification. For non-visible areas, for example, the standard of finish achieved may not be of concern.

At the outset of a project it is strongly recommended that a sample area is prepared and the standard of cosmetic finish is agreed by all parties concerned.

As an example, **SCI P160 section 4.3 clause R470** outlines three standards which can be specified:

- Basic Finish
The coating system achieves the required fire performance and corrosion protection performance but is not required to achieve any requirement for standard of finish.
- Decorative Finish
In addition to the requirements for (i) above, a good standard of cosmetic finish is generally required when viewed from a distance of 5 metres. Minor “orange peel” or other texture resulting from application or localised repair is acceptable.
- Bespoke Finish
In addition to the requirements for (i) above, the coating finish is required to have a standard of evenness, smoothness and gloss agreed between the Specifier and Contractor.

More work will be required to achieve the higher standards. It may be necessary to abrade the Interchar 3120 surface to remove texture. It may also be necessary to apply the Interchar 3120 in a series of thinner coats.

Topcoats are relatively thin and will tend to highlight rather than hide surface defects. It is, therefore, important to ensure that the required finish has been achieved prior to application of the topcoat.

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13. HANDLING

Interchar 3120 exhibits a much greater and faster resistance to mechanical damage due to handling. However, it is still essential that best practices are followed and steelwork coated with Interchar 3120 is stored and handled correctly to minimise damage and the need for site repair. Experience has shown that chains are frequently the most effective method for handling the coating when it is not fully hard, and particularly when turning steelwork in the paint shop. The damage can be quite deep, but localised and limited.

Straps can strip a large area of soft coating. They may make an impression on a firm coating but are considered not to cause such severe damage as chains when the coating has hardened. Straps may be more suitable for loading out finish coated steelwork. Other handling methods such as lifting eyes or lugs greatly reduce the potential for damage to the coating.

Once hard enough to handle, coated steelwork may be removed to a lay down area ensuring minimal stacking. Interchar 3120 shows a significantly greater resistance to water contact including pooling and running water than traditional single pack intumescent coatings. However, it is still advised that good storage and stacking practice is employed.

Erectors should use appropriate handling methods to avoid excessive damage. After erection all transport and erection damage should be repaired in accordance with Section 14.0.

All drying times stated in Technical Data Sheet are quoted at 2mm (80 mils) dry film thickness. Excessive solvent addition will result in longer drying times. Interchar 3120 curing will slow down as the ambient temperature drops to 10°C and below. Both these factors will result in longer times for coating to achieve satisfactory damage resistance and suitable handling characteristics.

14. POSSIBLE FILM DEFECTS

A number of potential defects are detailed below together with recommended remedial treatment.

Over-Application

Excessive thickness will lead to loss of hold-up and sagging of the wet coating. This will be more apparent on complex structures with potential for overlap areas. Any areas which are subject to this should have the coating removed and re-applied. A maximum dry film thickness value is supplied in the data sheet and this should be adhered to as closely as possible.

Overspray / Dry Spray

All dry overspray should be removed from primed surfaces prior to application of the Interchar 3120. Failure to do so may impair adhesion and affect final appearance.

Overspray present on Interchar 3120 may give an appearance of poor coalescence or surface roughness. Abrasion will be required to achieve a satisfactory smooth finish onto which a topcoat can be applied in order to satisfy the requirements for cosmetic appearance.

Overspray can be minimised by good work planning and good spray technique. Steelwork should be arranged to allow good access for spraying all surfaces. The sprayer should be close enough to the work surface at all times to minimise airborne overspray without leading to excessive ripples or other texture in the coating caused by the pressure of the spray. All dry overspray must be removed prior to topcoating Interchar 3120.

For large areas or areas where overspray may be unavoidable, it is advised that the adjacent steelwork be covered or taped to prevent overspray damaging cosmetic appearance.

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15. MEASUREMENT OF DRY FILM THICKNESS

Marking of Steelwork for Identification and Traceability

The dry film thickness of Interchar 3120 to be applied to individual steel sections will vary depending on the section size and its intended configuration as well as the number of sides to be coated, and for beams, the type of decking being supported. To ensure efficient working the applicator should be in possession of a full list of the specified dry film thicknesses and number of sides to be coated, etc and should mark the sections accordingly.

Marking with felt tip pen is a simple method but it is easily lost under coating or overspray and would not be visible when the dry film thickness is being checked. A more reliable method is to mark the details on a thin tinplate tag which can be folded to prevent obliteration by coating and then attached to the section by wire through a bolt hole. Any method of marking must not interfere with the application or adhesion of the coatings.

Wet Film Thickness

During the application of Interchar 3120, frequent checks should be made on the coating using a wet film comb to ensure that the specified thickness is achieved.

Wet film thickness readings are a guide to the applicator to enable application technique to be monitored and adjusted if necessary. They should be taken as frequently as necessary to enable a "feel" for the coating, and the number of spray gun passes required, to be established. On second and subsequent coats, wet film readings may be inaccurate due to the gauge sinking into the previous coat if the first coat softens.

Dry Film Thickness

After sufficient drying time a survey of the dry film thickness should be carried out using a suitable calibrated gauge. An electromagnetic induction instrument with a statistical function to store readings and give an average is most useful. Where dry film readings include a primer and/ or top coat an allowance must be made for these coatings and subtracted from the total reading.

The following is the recommended procedure for measuring dry film thickness and acceptance criteria based on Section 5.4 Testing, Clause R630 of SCI P160. Readings should be taken on every steel section as follows:

- I sections: Webs: Two readings per metre length on each face
 Outer flanges: Two readings per metre length on each face
 Inner flanges: One reading per metre length on each face
- Hollow sections: Eight readings per metre length spread evenly around the section.

No readings should be taken within 25mm (1 inch) of any edge or web/flange junction.

Dry Film Thickness Measurements over a Shim

Indicative dry film thickness readings can be taken on Interchar 3120 which has not fully hardened. This can be achieved by taking the readings over a shim using the following simple steps

- Place a rigid shim of known thickness on the Interchar surface
- Take readings over the shim.
- Subtract the thickness of the shim, and the primer and topcoat if applied, to give the dry film thickness of Interchar

This will give an indication only of the dry film thickness of the Interchar material.

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Dry Film Thickness Acceptance Criteria

The average thickness of each steel section should be equal to, or greater than, the specified thickness. Where any single thickness reading is found to be less than 80% of the specified thickness, a further three readings should be taken on the same face within a 300mm radius of the low reading. If one or more of the additional readings are also less than 80% of the specified thickness, further readings should be taken to establish the extent of the area of under thickness and the whole area should be brought up to the specified thickness.

Individual thickness readings of less than 50% of the specified thickness are not acceptable. The average measured dry film thickness of any steel section should not exceed by more than 10% of the maximum stated dry film thickness for the particular steel shape and orientation (as quoted in the latest published loading tables for the specific Interchar product).

Correction Procedure

Where the dry film thickness is found to be lower than unacceptable in the specification, remedial action will be necessary.

The applicator must first establish the extent of the low thickness. Areas of low thickness may be random but frequently a pattern can be observed e.g. low thickness tending to occur on inner flanges. Additional material should be applied to ensure conformance with the acceptance criteria stated in 11.3.3. The surface of the existing Interchar 3120 must be clean, dry and free from all contamination. If the topcoat has already been applied it will need to be removed. Where the dry film thickness exceeds the recommended limit, guidance should be sought from International Protective Coatings.

Dry Film Thickness of the Topcoat

The top coat dry film thickness is difficult to measure due to the variation in thickness of the underlying coats of intumescent and its own relatively low thickness in comparison.

It is, however, important that the topcoat is applied at the specified thickness to ensure the longevity of the system without applying excessive thickness. Judging the thickness of the top coat is also made more difficult as an uneven surface will require more coating to achieve a uniform appearance. As a guide, the number of spray gun passes to achieve the required wet film thickness can be determined by spraying on to a smooth surface. Monitoring of material usage will also give an indication of the applied thickness.

16. INSPECTION AND REPAIR

The repair method will depend on the extent of the damage. Repairs should be carried out at the earliest opportunity using the appropriate procedure from those given below.

Damage Down to Steel (Small Areas)

Remove unsound and damaged coatings to a neat firm edge with sound adhesion. Remove all corrosion products. Prepare steel surface in accordance with SSPC SP11 without polishing the substrate.

Chamfer coating edges by abrading. Reinstate the priming system, avoiding overlap of primer onto surrounding Interchar coating. Reinstate the Interchar 3120 within the recommended overcoating limits of the repair primer.

Apply Interchar 3120 in multiple applications by brush. If a topcoat has already been applied to the existing system, minimise overlap of fresh Interchar product over the existing topcoat. Apply topcoat as appropriate.

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Damage Not Requiring Primer Repair

Depending on severity of damage, either lightly abrade the damaged area to a chamfered edge, or cut out a suitable area of Interchar 3120 and feather out the edges. If cutting out, do not damage the priming system, otherwise repair as for “damage down to steel” will be required.

Reinstate Interchar 3120 to the required dry film thickness using the method described above. After the appropriate overcoating interval apply an approved topcoat in accordance with original specification.

Damage to Topcoat Only

Remove loose or unsound coatings to a firm edge and chamfer the edges. All surfaces should be clean, dry and free from all contamination. Reinstate top coat in accordance with original specification.

Future Inspection and Maintenance

The fire protection properties of the Interchar 3120 system will remain as long as the integrity of the coating scheme remains intact. Regular inspections of the Interchar 3120 fire protection system should be carried out. Any defects, damaged areas etc. must be repaired as soon as possible and as recommended above.

The inspection intervals for a project should be stated in the specification. The frequency of inspections will be dependent upon the environment and application within which the Interchar 3120 system is operating.

Refreshing of topcoats over time can lead to excessive build-up of top coat thickness which could be detrimental to the fire protection system and must be avoided. As a guide the maximum recommended number of topcoats is two, applied at 50 microns DFT per coat.

Only qualified topcoats can be applied over Interchar 3120. For further information contact International Protective Coatings.

17. HEALTH AND SAFETY

Interchar 3120 is intended for use only by professional applicators in industrial situations in accordance with the advice given in this leaflet and on containers and should not be used without reference to the Material Health and Safety Data Sheets (MSDS) which International Protective Coatings has provided to its customers. If for any reason a copy of the relevant Material Health & Safety Data Sheets (MSDS) is not immediately available the user should obtain a copy before using the product.

Minimum safety precautions in dealing with all paints are:

- Take precautions to avoid skin and eye contact (i.e. use overalls, gloves, goggles, face mask, barrier creams etc.).
- Where possible provide adequate ventilation. In confined spaces with poor or no ventilation, use airfed hoods.
- If product comes in contact with the skin, wash thoroughly with lukewarm water and soap or suitable industrial cleaner. Do not wash with solvents. If the eyes are contaminated flush with water (minimum 10 minutes) and obtain medical attention at once.
- These coatings may contain flammable materials and should be kept away from sparks and open flames. Smoking should be prohibited in the area.

Observe all precautionary notices on containers.

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Appendix 1: References

ISO12944-2: Paints and varnishes — Corrosion protection of steel structures by protective paint systems
Part 2: Classification of environments

EN16623: Paints and varnishes — Reactive coatings for fire protection of metallic substrates — Definitions, requirements, characteristics and marking

EAD-350402-00-1106: Fire Protective Products – Reactive coatings for fire protection of steel elements

ETAG018-2: Fire Protective Products – Reactive coatings for fire protection of steel elements

ISO8504: Preparation of steel substrates before application of paints and related products. Surface preparation methods.

ISO8501-1: Preparation of steel substrates before application of paints and related products. Visual assessment of surface cleanliness. Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings

SSPC: The Society for Protective Coatings

SCI P160: The Steel Construction Institute - Structural Fire Design: Off-site Applied Thin Film Intumescent Coatings

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