

Dimetcote Steel Primer 210

Zinc Silicate Preconstruction Primer

Product Data/ Application Instructions

- Two component inorganic zinc
- Use as weldable preconstruction primer or field or shop applied primer with excellent corrosion resistance
- Applied by airless or conventional spray with automatic or manual spray equipment
- Permits almost immediate handling, welding, cutting and fabricating

Outstanding Characteristics

DSP 210 is a two component inorganic zinc silicate preconstruction primer. DSP 210 consists of a liquid and a zinc powder paste component, for easier workability and to prevent the development of zinc dust during mixing of components. DSP 210 is far more abrasion resistant than organic primers and minimises damage during handling and fabricating.

Typical Uses

As a weldable preconstruction primer: a single coat, applied at 15-20 µm, protects against weathering, water and abrasion during transportation, handling and fabricating. Readily cut and welded by automatic or manual methods with minimum burnback from edge or cut or weld. Compatible with almost all types of organic topcoats and also compatible with Dimetcote 9 for structural steel systems.

Approvals and Certificates

DSP 210 meets the requirements of DVS-0501 as tested at the German Schweißtechnische Lehr- und Versuchsanstalt in Duisburg. DSP 210 is approved as weldable primer for application on blast cleaned steel plates and sections by Det Norske Veritas. DSP 210 is approved as prefabrication primer by Lloyds Register for use in ships. Welding test reports are available on request.

Resistance

DSP 210 with a suitable topcoat, has excellent resistance to weathering, abrasion and splash/spillage and fumes of water, salts and solvents. NOTE: Like all inorganic zinc coatings, DSP 210 alone is not suitable for immersion in or spillage of acid or alkaline solutions.

Physical Data

| | |
|--|--|
| Finish | flat |
| Colour | grey |
| Components | 2 |
| Mixing ratio (by volume) | |
| liquid | 1 part |
| paste | 1 part |
| Mixing ratio (by weight) | |
| liquid | 1.00 kg |
| paste | 3.55 kg |
| Curing mechanism | solvent release and reaction with atmospheric moisture |
| VOC* | |
| EC SED 1999/13/EC | 299 g/kg (600 g/l) |
| UK PG6/23(92) Appendix 3 | 607 g/l |
| Dry film thickness | 15-20 µm (preconstruction) 40 µm (permanent primer) |
| Number of coats | 1 |
| Calculated coverage | 19.0 m ² /l at 20 µm |
| Allow for application losses, surface irregularities, etc. | |
| Specific gravity | 2.12 kg/l (mixed product) |
| Flash points | |
| (Closed Cup)..... | °C °F |
| liquid | 12 54 |
| paste | 12 54 |
| Amercoat 13 | 12 54 |
| Amercoat 12 | 24 75 |

TYPICAL PROPERTIES

Temperature resistance 400°C/752°F dry heat

* VOC figures are quoted according to both the EC directive 1999/13/EC which are theoretically calculated figures and the UK PG6/23(92) Appendix 3 which are practically determined figures.

Dimetcote Steel Primer 210

Topcoating

Dimetcote Steel Primer 210 surface must be clean and dry before topcoating. Water soluble contaminants may be washed off with water. Oil grease and similar contaminants may be removed with an emulsion type cleaner such as Amercoat 57 oil cleaner. Rinse with clean water and allow to dry. Solvent wiping is not satisfactory as contamination may only be spread and not removed. Suitable topcoats are inorganic zincs, vinyls, epoxies, coaltar epoxies or chlorinated rubbers. For specific details contact your PPG representative.

In some cases a "mist" coat may be required to prevent application bubbling. Roughening by abrasive blasting is recommended when topcoated with inorganic zinc silicates.

Repair

Rusted areas must be spot blasted in accordance with instructions under **Surface Preparation** before touching up with Dimetcote Steel Primer 210. When blasting is not practical Amercoat 62, Amercoat 68 or Amercoat 160 zinc-based primers may be used for repair. See product literature for these primers for selection according to topcoat compatibility.

Surface Preparation

DRY ABRASIVE BLAST - Prepare steel in accordance with Sa 2½ Swedish Standard SIS 05-5900-1967, ISO 8501-1 or SSPC SP-10.

NOTE: Blast to achieve a 25 to 50 µm anchor profile, as determined with Testex Tape method or similar device.

Rougher profiles are acceptable but require increased film thickness for equivalent protection. Remove abrasive residues and dust from surface.

Apply Dimetcote Steel Primer 210 as soon as possible to avoid rusting or other contamination. Do not leave blasted steel uncoated overnight. Spot reblast if needed.

Application Equipment

The following equipment is listed as a guide and suitable equipment from other manufacturers may be used.

Adjustments of pressures and change of tip size may be needed to achieve the proper spray characteristics. **AIRLESS SPRAY** - Standard airless spray equipment. Such as Graco Hydra spray or others with a fluid tip with a 0.53 mm (0.021 inch) orifice or larger.

CONVENTIONAL SPRAY - Industrial spray equipment such as DeVilbiss MBC or JGA gun with 24FF or 704FF cap/tip with leather or teflon needle packing and heavy mastic spring. A variable speed agitator in the pressure pot and an oil and moisture trap in the main air supply line are essential. Separate air and fluid pressure regulators are recommended.

MIXER - Use a power mixer powered by an air motor or an explosion proof electric motor.

Application Data Summary

Like all high performance coatings, DSP 210 must be applied as recommended to obtain the maximum protection for which this coating is formulated. To obtain the maximum performance for which Dimetcote Steel Primer 210 is formulated, strict adherence to all application instructions, precautions, conditions and limitations is necessary. If conditions exist that are not within the requirements or limitations described, consult your PPG representative.

Application Data

Substrate steel
Application methods airless or conventional spray
Potlife (at 20°C/68°F) 8 hours

Potlife is dependent on temperature and quantities mixed.

Environmental Conditions

| | | |
|-------------------------|-----------|-------------|
| Air temperature | 0 to 50°C | 32 to 122°F |
| Steel temperature | 0 to 55°C | 32 to 131°F |

To prevent moisture condensation during application, surface temperature must be at least 3°C/5°F above dew point.

Drying Times

(at 20 µm dft and 50-95% RH)

At 20°C/68°F steel temperature

| | |
|----------------------|--------------|
| dry to touch | 1- 2 minutes |
| dry to handle | 2- 4 minutes |
| dry to topcoat | 16 hours |

At 10°C/50°F steel temperature

| | |
|----------------------|------------|
| dry to touch | 4 minutes |
| dry to handle | 10 minutes |
| dry to topcoat | 24 hours |

Drying times are dependent on temperature, film thickness and other environmental conditions. Times are proportionally shorter at higher temperatures and longer at lower temperatures.

Thinner Amercoat 13

Cleaner Amercoat 12

Dimetcote Steel Primer 210

Application Procedure

Dimetcote Steel Primer 210 is packaged in two components (paste and liquid) in the proper proportions, which must be mixed together before use.

1. Flush equipment with Amercoat 12 to remove any moisture that may be present. Moisture can cause hardening of Dimetcote Steel Primer 210 in equipment.
2. Stir separately the liquid and paste component using an explosion proof power mixer. Gradually stir the liquid into the paste, and continue stirring until the mixture is well dispersed and free of lumps.

Note: since potlife is limited and shortened by high temperatures, do not mix more material than will be used during the potlife period.

| Potlife (hours) | °C/°F | 10/50 | 20/68 | 30/86 |
|-----------------|-------|-------|-------|-------|
| | | 12 | 8 | 4 |

3. Strain material through 250 µm (60 mesh) screen to prevent possible clogging of equipment.
4. Thinning is normally not required. Thin only for workability or when a rough film or "dry spray" is obtained because of fast solvent evaporation during hot weather, high wind or high temperature of substrate. Use not more than approximately 10 vol % of Amercoat 13 thinner.
5. Keep containers loosely covered until ready to use to prevent skinning or gelling due to moisture in air. Skins should be skimmed off the top and the material strained through 250 µm (60 mesh) screen to remove any remaining pieces of skin. Discard gelled material.
6. Adjust spray equipment to apply an even wet coat with minimum overspray.
7. Continue slow stirring during application to maintain uniformity of material.
8. Apply in even parallel passes overlapping each pass 50%. Pay special attention to welds, cutouts, sharp edges, rivets, bolts etc. to insure proper thickness. Keep pressure pot at approximately the same level as spray gun for proper material delivery to gun.
9. When dry through, check film thickness with a non-destructive dry film thickness gauge. Recoat before cured if greater thickness is required. As weldable preconstruction primer recommended dry film thickness is 15 to 20 µm.
10. Random pinholes, holidays and small damaged or bare areas can be touched up by brush when film is dry to touch. Larger areas should be resprayed.
11. Prevent contact with water until the freshly applied coating is at least dry to touch.
12. In confined areas ventilate with clean air during application and drying until all solvents are removed. Temperature and relative humidity of the ventilating air must be such that moisture will not condense on the surface.
13. Clean all equipment with Amercoat 12 immediately after use or at least at the end of each working day or shift. Clean spray guns more often during hot weather. When left in equipment Dimetcote Steel Primer 210 will harden and plug spray equipment.

Shipping Data

Packaging

| | |
|--------------|-------------------------------|
| liquid | 5 l (4.55 kg) in 5 l jerrycan |
| paste | 5 l (15.48 kg) in 20 l can |

Shipping weight

| | |
|--------------|-----------------|
| liquid | approx. 5.4 kg |
| paste | approx. 18.5 kg |

Shelf life

| | |
|--------------|--|
| liquid | 6 months from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F). |
|--------------|--|

| | |
|------------|---|
| paste..... | 1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F) |
|------------|---|

Dimetcote Steel Primer 210

Caution

The Dimetcote Steel Primer 210 liquid is highly flammable. Dimetcote Steel Primer 210 paste is flammable. Dimetcote Steel Primer 210 liquid and paste cause skin and eye irritation. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged breathing of vapour. Avoid contact with skin or eyes. Do not take internally. In case of contact, immediately flush skin with plenty of water; for eyes, flush with plenty of water for at least 15 minutes and get medical attention. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to health;

1. circulate adequate fresh air continuously during application and drying;
2. use fresh air masks and explosion proof equipment;
3. prohibit all flames, sparks, welding and smoking. Take precautionary measures against static discharges.

If welding is to be performed in confined spaces on steel coated with Dimetcote Steel Primer 210 do so in accordance with instructions in American National Standard Z 49.1-1967, "Safety in Welding and Cutting". Do not empty into drains. Take precautionary measures against static discharges. For specific information on hazardous ingredients, required ventilation, possible consequences of contact, exposure and safety measures see Safety Data Sheet.

Safety

Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods.

Warranty

PPG warrants its products to be free from defects in material and workmanship. PPG's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at PPG's option, to either replacement of products not conforming this warranty or credit to Buyer's account in the invoiced amount of the non-conforming products. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

PPG makes no other warranties concerning the product. No other warranties, whether express, implied or statutory, such as warranties of merchantability or fitness particular purpose, shall apply. In no event shall PPG be liable for consequential or incidental damages.

Any recommendations or suggestion relating to the use of the products made by PPG, whether in its technical literature, or response to specific enquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyer's having requisite skill and know-how in the industry, and therefore it is Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

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To avoid any confusion that may arise through translation into other languages, the English version of the Product Data/Application Instructions will be the governing literature and must be referred to in case of deviations with product literature in other languages.

Condition of Sale

All our transactions are subject to our Terms and Conditions of Sale.

