

Amercoat 37-B-1 / 37-G-1

Temperature Indicating Paint Blue/Green

Product Data/ Application Instructions

- Indicates potential dangerous hot spots
- Colour changes
 - 37-B-1: above 200°C/392°F from blue to white
 - 37-G-1: above 260°C/500°F from green to white
- Good weathering resistance
- Colour change is irreversible

Typical Uses

Amercoat 37-B-1 and Amercoat 37-G-1 are designed to indicate potentially dangerous "hot spots" on the exterior of reactors and pressure vessels resulting from the breakdown of internal insulation. A perceptible colour change marks the area where overheating has occurred. Colour retention is excellent to the threshold temperature. Above the threshold temperature an irreversible progressive discoloration occurs at a rate determined by time and temperature.

Amercoat 37-B-1

up to 175°C/347°F maintains deep blue colour
 at 200 - 230°C (392 - 446°F) perceptible change to light blue
 green in 36 to 60 hours
 at 260°C/500°F changing to white in 24 hours

Amercoat 37-G-1

up to 260°C/500°F maintains deep green colour
 at 280°C/536°F fading observed after three weeks
 at 315°C/599°F perceptible change after 18 hours
 at 400°C/752°F colour change to white after 3
 hours

Recommended Systems

Amercoat 37-B-1 and Amercoat 37-G-1 are self-priming and may be applied directly to bare steel. For best steel protection priming with Dimetcote 11 is recommended.

Physical Data

Finish	flat	
Colour	37-B-1: blue 37-G-1: green	
Components	1	
Curing mechanism	evaporation of solvents	
Volume solids	44% (ASTM D2697; 7 day)	
VOC*	37-B-1	
EC SED 1999/13/EC	384 g/kg (449 g/l)	
UK PG6/23(92) Appendix 3	458 g/l	
VOC*	37-G-1	
EC SED 1999/13/EC	398 g/kg (487 g/l)	
UK PG6/23(92) Appendix 3	486 g/l	
Dry film thickness	25 - 40 µm	
Number of coats	1	
Calculated coverage.....	37-B-1	37-G-1
(at 25 µm).....	18.8 m ² /l	17.6 m ² /l
Allow for application losses, surface irregularities, etc.		
Temperature resistance	37-B-1	37-G-1
	175°C	260°C
	347°F	500°F
	(dry heat; maximum without changing of colour)	
Specific gravity	37-B-1	37-G-1
	1.18 kg/l	1.22 kg/l
Flash points		
(Closed Cup).....	°C	°F
37-B-1	40	104
37-G-1	40	104
Thinner/cleaner	24	75

* 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.

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Repair

Spot blast areas to Sa 2½, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch up.

Surface Preparation

Coating performance is in general is proportional to the degree of surface preparation. Abrasive blasting is usually the most effective and economical method.

DIRECT APPLICATION ON STEEL - Blast steel surfaces to a minimum of Sa 2½ (ISO 8501-1) or Steel Structures Painting Council SP-10. Note: blast to achieve a surface profile not to exceed 75 µm as determined with *Testex* Tape or similar instrument. Remove abrasive residues and dust from surface.

APPLICATION ON PRIMED STEEL - (primed with Dimetcote 11) Refer to specifications of the specific primer being used. Prior to coating, primed surface must be clean, dry, undamaged and free of all contaminants including salt deposits. Round off all rough welds and remove weld spatter.

IMPORTANT - Apply Amercoat 37-B-1 / 37-G-1 as soon as possible after surface preparation to prevent any contamination. Do not leave blasted steel uncoated overnight. In case of contamination, remove contaminants. Spot blast steel if needed.

Application Equipment

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

Adjustments of pressure and change of tip size may be needed to obtain the proper spray characteristics.

AIRLESS SPRAY - Standard airless spray equipment, such as Graco, DeVilbiss, Nordson-Bede, Spee-Flo or others having a 0.013 to 0.021 inch (0.33 mm) fluid tip or larger.

CONVENTIONAL SPRAY - Industrial equipment such as DeVilbiss MBC or JGA gun with 78 or 765 air cap and "E" fluid tip and heavy mastic spring or Binks No. 18 or 62 with a 66 x 63 PB nozzle setup. Separate air and fluid pressure regulators, mechanical pot agitator and a moisture and oil trap in the main air supply line are recommended.

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

Application Data Summary

Like all high performance coatings, Amercoat 37-B-1 and Amercoat 37-G-1 must be applied as recommended to obtain the maximum protection for which these coatings are formulated. To obtain the maximum performance for which Amercoat 37-B-1 and Amercoat 37-G-1 are 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 suitably primed steel / abrasive blasted steel

Application methods conventional or airless spray, brush or roller*

Environmental Conditions

(during application)
Air temperature 5 to 50°C 41 to 122°F
Surface temperature 5 to 60°C 41 to 140°F

To prevent moisture condensation during application, surface temperature must be at least 3°C/5°F above dew point. Never apply coatings under reverse environmental conditions. Ensure good ventilation when applied in confined areas to assist evaporation and elimination of solvents.

Drying Times

(ASTM D1640; at 25 µm)

Amercoat 37-B-1

	°C/°F .30/86	20/68	10/50
dry through.....	20	30	60 (minutes)
dry to recoat or topcoat (minimum).....	8	16	48 (hours)
(maximum).....	not restricted		

Amercoat 37-G-1

	°C/°F .30/86	20/68	10/50
dry through.....	3	4	16 (hours)
dry to recoat or topcoat (minimum).....	16	24	48 (hours)
(maximum).....	not restricted		

NOTE: drying times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions. Times are proportionally shorter at higher temperature and longer at lower temperatures. Prior to recoating ensure surface is clean. Maximum recoat time depends on coating system to be used. Consult your PPG representative for specific recommendations.

Thinner/cleaner Amercoat 65

* Brush or roller application may require additional coats.

Amercoat 37-B-1 / 37-G-1

Application Procedure

Amercoat 37-B-1 and Amercoat 37-G-1 are packaged as 5 l in a 5 l can; thinner/cleaner is Amercoat 65.

1. Flush equipment with Thinner before use.
 2. Thin only if necessary for workability, add up to 10% by volume.
 3. Apply a wet coat even, parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays. When applying directly over inorganic zincs at full thickness, bubbling may occur. A test patch is recommended and if bubbling occurs, apply a "mist coat". Consult your PPG representative for further information.
 4. Double coat all welds, rough spots, sharp edges and corners, rivets, bolts, etc.
 5. Application at 70 to 100 µm wet film thickness will normally provide 25-40 µm dry film.
 6. Small damaged or bare areas and random pinholes or holidays can be touched up by brush. Repair larger areas by spray.
 7. In confined areas ventilate with clean air during application and drying until all solvents are removed. Temperature and humidity of ventilating air must be such that moisture condensation will not form on surface.
- # For conventional spray, use adequate air pressure and volume to ensure proper atomization.
- # Normal recommended dry film thickness is 25 to 40 µm.
8. Clean all equipment with Thinner immediately after use or at least after each working day or shift.

Shipping Data

Packaging	5 l in 5 l can
Shipping weight	approx. 6 kg
Shelf life	1 year from shipment date when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F).

Amercoat 37-B-1 / 37-G-1

Caution

This product is flammable. Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the 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.

Do not empty into drains. Take precautionary measures against static discharges. For specific information on hazardous ingredients, required ventilation, possible consequences of contact 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.

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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.

