



Technologies

TECHNICAL BULLETIN

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GRANODINE 606

1. PRODUCT DESCRIPTION

GRANODINE 606 is a low temperature process which simultaneously degreases and produces a lightweight phosphate coating on steel, aluminium and zinc surfaces. It is applied in a conveyerised two, three or four stage washing plant.

GRANODINE 606 provides the following important benefits:-

1. Degreases and phosphates in one operation.
2. Treats steel, aluminium, zinc die-castings, electro-zinc and galvanised sheet in one plant either together or separately.
3. The concentrated liquid product is easy to handle and ideally suited for addition to the process tanks by a simple metering pump or a complete Automatic control System.
4. Operates at low temperatures with consequent energy saving.
5. Contains special detergents which give effective degreasing at low temperatures with minimum foam. Unlike most similar products separate detergent additions are rarely required.

The blue phosphate formed has a coating weight of 0.2-0.4 g/m² (20-40 mg/sq ft) and provides an excellent base for paint.

2. GRANODINE 606 BATH MAKE-UP

Spray

For each 1,000 litres of bath add to the water 10 litres (13.5kg) of **GRANODINE 606** and mix thoroughly by circulating through the spray pumps. This will give a pointage of about 5.

Dip

For each 1,000 litres of bath, add to the water 30 litres (40.5 kgs) of **Granodine 606** and mix thoroughly.

This will give a pointage of about 15.

If heavy soil is present on the work and the process is run at the lower end of the temperature range it may be necessary to add **PARCOCLEANER 142/9**. For each 10 litres of **GRANODINE 606** in make-up or replenishment add ½ litre of **PARCOCLEANER 142/9**.

3. GRANODINE 606 CONTROL POINTS

Temperature	25°C-50°C (75-120°F.)
Time	1-4 minutes.
Spray Pressure	100-200 kPa (15-30 psi.)
Pointage - Spray	3-6 ml
Pointage - Dip	12-18 ml

****The GRANODINE may be applied by spray in one or more stages, this time is the total treatment time in the GRANODINE.**

4. GRANODINE 606 BATH POINTAGE CONTROL

Normally determined twice daily.

- (a) Adjust **GRANODINE** bath to its normal working level with tap water.
- (b) Measure 10 mls of the bath solution into a flask.
- (c) Add a few drops of Indicator Solution No. 3 (phenolphthalein in 50% methylated spirit) and mix by shaking.
- (d) Titrate with Titrating Solution No. 11 (0.1N Sodium hydroxide) until a permanent pink colour is obtained.
- (e) The number of mls of Titrating Solution No. 11 added is the pointage of the bath.
- (f) Add 2.15 litres of **GRANODINE 606** per 1,000 litres of bath for each point below the required figure.

5. RINSING

Work is rinsed in cold fresh water stage and/or then in a hot water stage containing a trace of **DEOXYLYTE 10. DEOXYLYTE** in the final rinse counteracts the effects of any hardness in the rinse water and improves the corrosion resistance. It also acidifies the surface slightly before drying and there by ensures good paint adhesion even under prolonged humid conditions.

6. DRYING

Remove any pockets of rinse water by means of compressed air blow off or suction line and dry as quickly as possible in an oven at a temperature not exceeding 150°C (300°F.)

7. MAINTENANCE

Shut down the spray pumps in the **GRANODINE** stages occasionally (preferably each night) and allow the solution to cool and settle. Before starting up again, run in cold water and allow to overflow slightly. This skims the surface and removes any oil or scum.

The **GRANODINE** bath can normally be used for long periods before the process begins to lose its effectiveness. When necessary, discard the **GRANODINE** solution from the spent stage and refill with fresh solution.

Alternatively, in a multi-stage phosphate plant the first stage can be discarded each time and replaced by the contents of the second stage and so on, the final **GRANODINE** stage being refilled with fresh solution.

Thoroughly clean the screens and jets at regular intervals to maintain the plant in good working order. The effectiveness of **GRANODINE 606** is largely dependent on the efficiency of the spray jets.

If very heavy oil is being removed, the bath may need changing and/or overflowing more frequently to keep it operating properly.

8. EQUIPMENT

The process requires a 2, 3, 4 or more stage conveyerised spray plant, a compressed air blow or suction line if necessary and a drying oven. The spray plant can be constructed entirely of mild steel. Descaled mild steel should be used for the **GRANODINE** tanks as millscale can promote pitting under some conditions.

The oven must be adequately exhausted and a gas or oil oven should be fired indirectly to ensure that the phosphate metal surface does not become contaminated.

9. SERVICE

All **GRANODINE** plants are put into operation by Henkel's Technical Staff who give the operators in charge the few instructions necessary to ensure the best possible results.

10. HANDLING PRECAUTIONS

GRANODINE 606 is slightly acidic.

When handling the **GRANODINE** wear goggles. Wash off any splashes on the skin with cold water.

11. ENQUIRIES

Further information on the hazards and handling of **GRANODINE 606** is available on a Safety Data Sheet and can be obtained from your Henkel Technical Representative.

DISCLAIMER

Any information given is, to the best of our knowledge, the best currently available, with respect to our products and their use, but it is subject to revision as additional knowledge and experience is gained. Such information is offered as a guideline for experimentation only and is not to be construed as a representation that the material is suitable for any particular purpose or use. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use. This information is not a license to operate under nor is it intended to suggest infringement of any patent. We guarantee a uniform quality standard for this product. The only conditions and warranties accepted by Henkel in relation to this product or process are those implied by either Commonwealth or State statutes.