



METALGARD™ 417

Multi-metal Cleaning Compound Technical Information Sheet

Description & Application:

Metalgard 417 is a medium alkalinity, non-silicate containing alkaline cleaning compound that is formulated for use by spray application and is suitable for use in pressure washing machines.

Metalgard 417 may be used in pre-cleaning, as a first-stage cleaner and as an application degreaser for the removal of machining oils, swarf and general soiling from metals.

Primary features attributable to Metalgard 417 are:

- Non-silicate containing cleaner;
- Suitable for multi-metal substrates;
- Suitable for spray washing machines;
- Liquid concentrate for easier handling;
- Free rinsing to leave attractive, stain free finish.

Applications

Metalgard 417 is suitable for use in:

- Aerospace;
- Automotive;
- Precision engineering;
- Marine engineering; and
- General engineering.

Compatibility

Metalgard 417 is safe for use with most common metals, including white metals such as aluminium and zinc.



Certificate No. GB06/69741

Safer
Solutions
For Industry

Health and Safety

Metalgard 417 is non-flammable.

Metalgard 417 is classified as Corrosive and contact with eyes and skin should be avoided.

See Material Safety Data Sheet for details.

Typical Properties

Appearance	Light brown coloured liquid
pH	12.0 units (1% sol'n)
Density @ 20 °C	1.26
Solubility in water	Complete
Boiling Point, °C	103

Storage life in original, unopened containers, at between 0 °C and 35 °C (32° to 95 °F), is not less than 24 months.

Process Control

Plant / Equipment:

Tanks/vats used to contain the cleaner, Heating elements, spray tunnels, washing machine components, etc. should be manufactured from:

General-purpose constructional steel to DIN EN 10025

Chromium nickel steel, material no. 1.4301

Chromium nickel steel, material no. 1.4541

Chromium nickel molybdenum steel, material no. 1.4571

Solution Make-up:

The strength and temperature of operation of Metalgard 417 working solution will be dependant upon the nature and type of work being processed, the treatment time and the individual plant characteristics. The following recommendations have been found to be suitable:

Pre-Cleaning

Add Metalgard 417 to give a concentration between 1.5 and 8 litres (2 to 10 Kg) per 1000 litres of working solution with optimum operation being at a level of 4 litres (5 Kg) of Metalgard 417 per 1000 litres of working solution.

First-Stage Cleaning

Add Metalgard 417 to give a concentration between 1.5 and 40 litres (2 to 50 Kg) per 1000 litres of working solution with optimum operation being at a level of 12 litres (15 Kg) of Metalgard 417 per 1000 litres of working solution.

Application Cleaning

Use Metalgard 417 at a concentration of between Neat solution down to a solution containing 10% by volume, dependant on the the cleaning required and the application method used.

Solution Control:

Process tanks should be analysed periodically to determine the concentration of Metalgard 417 present and additions made to maintain the concentration within the recommended limits.

Indicator: - phenolphthalein

Testing Solution: - 0.1N sulphuric acid

Take a 50 ml sample of the working solution and add a few drops of indicator solution. Titrate with the Testing Solution until the pink colour is discharged.

The number of ml of Testing Solution used is the Pointage of the solution.

The Pointage multiplied by 0.9 is equivalent to the Metalgard 417 concentration in litres/1000 litres or multiplied by 1.2 for Kg/1000 litres.

Note: For high concentrations reduce the sample size to a 10 ml sample and increase the calculation to Pointage x 4.6 = litres/1000 litres (Pointage x 6 = Kg/1000 Litres).

Replenishment

For each point required, add 900ml of Metalgard 417 concentrate per 1000 litres of process solution.

Processing Procedure

Spray Pre-Cleaning

Metalgard 417 is normally sprayed at between ambient temperature and temperatures up to 60°C will aid cleaning.

The work is sprayed for a suitable time, usually 0.5 to 2 minutes dependant on the nature and degree of soiling or until the work has achieved a satisfactory degree of cleanliness.

Spray pressures between 25 and 40 bar (400 to 600 psi) have been found to be optimum for satisfactory cleaning.

After cleaning, parts will normally pass directly to the main cleaning stage.

First-Stage Cleaning

Metalgard 417 is normally sprayed at temperatures between 35°C and 45°C, but temperatures between 30°C and 60°C will be suitable.

The work is sprayed for a suitable time, usually about 1 minute.

After cleaning, parts should be thoroughly rinsed with clean water prior to further processing.

Application Cleaning

Apply the working solution, either by lance or by swabbing with brush or mop. Allow the cleaning solution to remain on the surface for sufficient time for the soil to be fully loosened, re-working if necessary. Assist the removal by gentle agitation with brush or mop.

Finally, rinse the cleaned surface thoroughly with water.

CONTACT DETAILS:

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In the event of any technical queries, please contact:

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Packaging Details:

Metalgard 417 is available in:

- 25 Litre Containers.
- 210 Litre Drums (on application)