



METACLEAN™

Alkaline Cleaner Technical Information Sheet

Description & Application:

Metaclean is a superior blend of alkaline metal silicates with complexing, sequestering and surface-active agents to give a superior, non-foaming, alkaline immersion cleaner suitable for all metal surfaces.

The cleaner is supplied as a liquid concentrate and is formulated to be applied by dip application process.

Primary features attributable to Metaclean are:

- Low foaming;
- Suitable for all ferrous and non-ferrous metal substrates
- Passes sandwich corrosion test;
- Liquid concentrate for easier handling, concentrate is v stable (>2 yrs).
- Free rinsing to leave attractive, bright finish;
- Formulated with maximum concern for the environment, all surfactants, sequestrants and corrosion inhibitors, etc. are fully biodegradable and non-endocrine disrupting.

Applications

Metaclean is highly effective for the removal of soils and surface contaminants from ferrous and non-ferrous metal surfaces.

It is suitable for use in:

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

Compatibility

Metaclean is compatible with most of the metals and their alloys.



Certificate No. GB06/69741

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Health and Safety

Metaclean is based on essentially non-toxic chemicals. It is not flammable, is neither a known or suspected carcinogen and is formulated using environmentally acceptable detergents and surfactants. It does not contain any endocrine disrupting compounds that are damaging to watercourses.

Metaclean is classified as corrosive and contact with eyes and skin should be avoided.

See Safety Data Sheet for details.

Typical Properties

Appearance	Clear liquid
pH	14.0 units (Neat sol'n) 13.2 units (10% sol'n) 12.0 units (1% sol'n)
Density @ 20 °C	1.18
Solubility in water	Complete
Boiling Point, °C	100
Volatile Organic Compounds (VOC), g/L	Nil

Storage life in original, unopened containers, at between 0 °C and 35 °C (32° to 95 °F), is not less than 36 months.

Test Compliance:

Meets the requirements of UK Defence Standard 03-2 method B2.

Capable of meeting the test requirements of AMS 1537

Capable of meeting the test requirements of Boeing specification BAC 5763 Type II and D6-17487

Capable of meeting the test requirements of Douglas specification CSD #1

Process Control

Plant / Equipment:

Tanks/vats used to contain the cleaner should be manufactured from mild steel or corrosion resistant steel.

All pumps should be manufactured from mild steel.

Copper based alloys should be used with caution, some alloys are better than others and users should confirm suitability.

Heating coils should be made from suitable non-metallic materials, non-corrosion resistant steel, corrosion resistant steel or titanium alloys.

Solution Control:

Process tanks should be analyzed periodically to determine the concentration of Metaclean present and additions made to maintain the concentration within the recommended limits.

The test procedure to undertake this analysis is as follows:

- Pipette a 25ml sample of the process solution into a conical flask.
- Add 5 drops of bromophenol blue indicator sol'n (0.1%) and titrate against 0.1N Hydrochloric Acid to a clear change of colour from blue to yellow green.
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- $\text{Concentration of Metaclean (g/L)} = \text{Titre} \times N \times 20$
Where N = exact normality of the hydrochloric acid.
Note: Where the result is required in oz/US gal multiply the g/L value by 0.1335

A special test kit is available to facilitate the analysis of the cleaner for users that have limited laboratory test facilities. Request information on this kit from your local Amity representative.

Processing Procedure

The product should be operated at:

- A concentration of between 10 and 40 g/l (1.3 to 5.3 oz/US gal);
- A temperature between 40 °C and 80 °C (104 °F to 176 °F) is preferred.

Application is normally by dip. Allow sufficient contact time, normally 5 to 20 minutes dependant upon the degree and nature of the contaminants, for the cleaner to penetrate, lift and adsorb any soils.

There is no problem with extended solution contact times up to 40 minutes, where particularly difficult soils are encountered. Removal of tenacious deposits can also be assisted by using a cloth, mop, or stiff bristle brush.

Components should be rinsed thoroughly following processing prior to drying or proceeding to the next stage of a sequence of wet operations.

CONTACT DETAILS:

For UK and Rest of the World:

Amity International,
Libra House, West Street
Worsbrough Dale,
BARNSELY
S YORKS, S70 5PG,
ENGLAND

Tel: +44 (0) 1226 770787

Fax: +44 (0) 1226 291936

E-mail: sales@amityinternational.com

Web site: www.amityinternational.com

For North America:

Amity International,
PO Box 5254,
1704 Denver Road,
ANDERSON,
SOUTH CAROLINA,
SC29623, USA.

Tel: 864 622 2233

Fax: 864 622 2234

For any further information, please contact your distributor or Amity.

In the event of any technical queries, please contact:

Mr. Ram Singh at the UK/ROW address, above, or by e-mail to:

rsingh@amityinternational.com

Packaging Details:

Metaclean is available in:

- 25 Litre Containers;
- 210 Litre Drums;
- IBC Containers (available on request).