



Confederate Chemicals Ltd

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BJ-STRIP – TECHNICAL DATA SHEET

Description

A two pack stripping system consisting of a make up solution (BJ-STRIP) and replenisher (BJ-REPLENISHER) to remove paint and powder coatings from a variety of substrates. **The BJ-STRIP SYSTEM does not contain Methylene Chloride, Methanol, Monoethanolamine or Butyl Glycol (2-Butoxyethanol), or any products classified with the following risk phrases; R40, R45, R46, R49, R60 and R61.**

The Control of Substances Hazardous to Health Regulations 2002 (COSHH)

For a Safety Data Sheet on this product please contact Confederate Chemicals by telephone, or by e-mail at lab@confederatechemicals.co.uk

Instructions for use

The product described in this data sheet will remove, in various degrees, organic coatings from several substrates. We are always pleased to conduct laboratory scale tests of customer's workpieces and to demonstrate samples at the customer's premises in order to assist in determining the most suitable product for his stripping requirements. Nevertheless, because the exact nature of the coating is not always known and because coatings, pretreatments and operating conditions change, the final suitability for a particular purpose must always be determined by the customer.

Concentration: Used as received.

Temperature: Ambient to 50°C. Preferred range 35-45°C.

Time: As required. Varies depending upon the temperature and the nature of the work to be stripped.

Agitation: Regularly raise and lower the work in the solution to wash away stripped powder from the metal surface. This exposes the unstripped coating to the stripper and is particularly relevant to upward facing grooved horizontal surfaces. Any form of mechanical agitation or circulation will improve stripping times.

Sludge removal: Regular removal of stripped residues by continuous filtration is essential to maintain the solution in optimum condition and heaters at their most efficient. Generally this will be by means of a filter press which also minimises solution loss and waste generated for disposal. BJ-STRIP is designed for use in this manner and its sludge characteristics make desludging by settlement impractical.

Rinsing: An overflowing cold water rinse is suitable. Air agitation is beneficial. Pressure washing may be required. It is essential that water is not introduced into the stripping tank by any means, including partially stripped work being put back into it without being totally drained first. Ensure there is no splashback from pressure washing into the stripping solution.

Water tolerance: **BJ-STRIP resists moderate water contamination. In case of severe contamination it may split into phases. Metal attack will occur on aluminium, magnesium and also zinc diecastings.**

Solution maintenance: Top up regularly with BJ-REPLENISHER to maintain the desired volume.

Alkalinity Titration: Take a 25ml sample from the tank. Filter the sample and titrate 2mls of the filtrate against 0.1N Hydrochloric Acid to the Phenolphthalein end point (pink to colourless). Each ml is considered 1 point.



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Normally a BJ-STRIP installation will operate between 12 and 20 points.

- 1) ABOVE 20 points: Make regular top up additions of BJ-STRIP rather than BJ-REPLENISHER until system pointage is reduced to the desired level.
- 2) BELOW 12 points: If it becomes impossible to maintain the solution above 12 points then add Potassium Hydroxide flake accelerator through an addition chamber. For each point required add 5kg of Potassium Hydroxide per 1000 litres of BJ-Strip.

With a 50% solution of BJ-STRIP with water the solution will titrate between 5-15 points.

Equipment

Mild steel is suitable for tanks and pipework. Keep the surface area of the stripping tank to a minimum to avoid solvent losses. Use a close fitting lid to minimise evaporation, risk of contamination and as a safety precaution. Incorporate a frame to the base to keep the work out of removed residues. Ensure pipe work has threaded unions and joints incorporated to allow easy dismantling for cleaning if required.

Indirect heating capable of maintaining the tank at the operating temperature and occasionally raising it to 90 °C (to drive off, if necessary, excess water) is required. Ideally this could be an oil jacket. If steam or water is used, care should be taken to ensure there is no water leakage into the stripper. **Low density** electric heaters may be used but care must be taken to ensure they are of the correct specification and that stripped residues are not allowed to build up on the elements. Electric immersion heaters should have a cold "leg" at the surface otherwise fumes will evolve. Electric heaters should ideally be mounted on a removable frame to allow regular inspection and cleaning. Standard immersion elements and naked flame heaters are unsuitable.

Air operated pumps with PTFE ("Teflon") faced diaphragms are recommended for circulation through the filter press. These avoid flame proofing considerations, are less susceptible to damage if stalled by back pressure, are more suitable for pumping suspended solids and have no shaft seals to fail. Electric pumps are preferred for circulation as they maintain a constant flow, but these considerations need to be addressed when specifying them. The solution should be pumped from one end of the tank and returned via a sparge pipe or eductors at the bottom of the tank to create turbulence. The inlet pipe for this circulation system should draw from 6-9" above the tank base. This assists in washing stripped residues from the work surface and from heaters.

PTFE is suitable for gasket materials. Copper, brass, aluminium and zinc diecastings should not be used for taps, pipes, valves etc. Galvanised materials are undesirable.

The addition of Potassium Hydroxide accelerator is most easily made using a dissolution chamber into the circulation system. This can be made with a bag filter housing with only the supporting mesh used to contain the accelerator. (Do not use a filter bag). Ensure the chamber is above the solution level and can be drained. It should also be possible to isolate and bypass it with valves. The stripping solution should be pumped through the filter chamber until all the Potassium Hydroxide has dissolved.

A filterpress is the most efficient filtration system. As a guide, for a typical 2000 litre installation an industrial 12 plate press or larger may be suitable although the recommendation of the filterpress supplier should always be sought. The filter press should operate up to at least 6 bar. The solution return from the filterpress to the stripping tank is by gravity. This necessitates mounting the filterpress above the solution level that also aids filter cake removal.

When sizing pumps, pipework, heaters and the filterpress always err on the large side where possible.

For more detailed information about Confederate Chemicals paint stripping systems, please visit our website at www.paintstrip.com.

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