



CONSERVATION BY DESIGN LIMITED

Timecare Works
5 Singer Way
Woburn Rd Ind. Estate
Kempston
Bedford
MK42 7AW
Great Britain

Tel: (01234) 853555
Fax: (01234) 852334
Email info@conservation-by-design.co.uk
Web: <http://www.conservation-by-design.co.uk>

PRODUCT DATA SHEET

PTDA DEACIDIFICATION TREATMENTS FOR PAPER

PTDA solutions are non - aqueous treatments for preserving all types of paper and card. They are colourless, safe solutions which can be applied by dipping, spraying or brushing and are effective in neutralising existing acidity as they deposit an alkaline reserve throughout the paper which increases the life of documents by several times more than normal. They may also assist in cleaning and will provide a resistance against oxidative attack.

They are simple to use, rapid and cost effective and avoid the problems associated with aqueous treatment methods especially as books may be treated whilst bound without any danger of swelling or breakage of the binding.

Unlike previous generation solutions PTDA solutions do not contain any CFC components, but otherwise the active ingredients remain the same and so in effect they have been in use for more than a decade by leading libraries and institutions throughout Europe, including the British Library and the Biblioteque Nationale. Papers and documents treated by these solutions have been thoroughly tested by a number of independent institutions.

The solvents used have essentially no effect on paper but, although very few inks are affected, all unknown inks should be tested initially for discolouration or feathering etc.

(pH meter electrodes may be affected by contact with the solvent prior to evaporation, so to test the solution prior to use never use the electrode direct. Moisten a piece of paper, apply the solution, allow the solvent to evaporate and then test with the tip of the electrode. Prior to use the solution should have a measure around pH 9.1)

Papers with fibres containing large amounts of lignin, such as newspapers, are naturally pH sensitive and may yellow slightly on treatment, although this is stable and eventually these will become whiter than untreated material which browns during ageing.

SPECIFICATION

A Clear to slightly yellow liquid with a solvent odour, density 1.1 kg / litre, containing Methyl & Ethyl Magnesium Ethoxy Carbonates, less than 5% Methyl Alcohol, less than 15% Ethyl Alcohol and Siloxane solvents. The solution is non - toxic but ventilation systems should be used when spraying to avoid the possibility of suffocation. Spraying should also not be conducted in areas where naked flames are present, for example gas heaters, as the vapours may be degraded by fire to more harmful components.

APPLICATIONS AND USE

PTDA solution is designed to dry rapidly, therefore the work should be planned so that it can be completed as quickly as possible. It will become contaminated with white deposits when exposed to the air for a period of time and

eventually will gel. Solutions should not be used within 10 - 15 minutes of pouring. Used solution must NOT be returned to the bulk container but, if still clear, may be retained for future use in an airtight bottle.

Dipping/ Soaking

Pour solution to a depth of 3/4 inch into a tray / tank sufficiently large to suit the paper being treated. Place documents into the solution, making sure that all areas are thoroughly wetted. There is no need to soak the paper, although this may be advantageous if washing is desirable. Remove between two sheets of clean blotting paper under moderate pressure.

Brushing

PTDA solution may be applied by brush or roller, but care should be taken in the choice of equipment used as ordinary brushes may contain soluble adhesives or stains.

Spraying

When Spraying, the documents should be placed in an upright position. The spray gun may be adjusted to provide wet spray with minimum fine mist and the document should be well wetted. Spraying MUST be conducted in a fume hood or extract system as the solvents, though non toxic, may cause suffocation if a build up of vapours occurs in confined spaces.

If using your own spray gun, please note that the solution is not compatible with aluminium alloys or zinc metals and will attack such materials rapidly. All equipment must be constructed of inert plastic or stainless steel.

Cleaning

All utensils should be cleaned after use with alcohol and then dried. Spray guns and pipelines must be flushed with cleaning solution at the end of each period of use and must Not be left for long periods with treatment solution in the lines.

When using a special spray gun (optional mobile spray unit) the gun should be replaced in the solvent tank provided when not in use.

For heavily contaminated items a special acidic cleaning solution is available.



CONSERVATION BY DESIGN LIMITED

Timecare Works
5 Singer Way
Woburn Rd Ind. Estate
Kempston
Bedford
MK42 7AW
Great Britain

Tel: (01234) 853555
Fax: (01234) 852334
Email info@conservation-by-design.co.uk
Web: <http://www.conservation-by-design.co.uk>

DEACIDIFICATION TREATMENTS FOR PAPER

PTDA solutions are non- aqueous treatments for preserving all types of paper and card. They are colourless, safe solutions which can be applied by dipping, spraying or brushing and are effective in neutralising existing acidity as they deposit an alkaline reserve throughout the paper which increases the life of documents by several times more than normal.

They may also assist in cleaning and will provide a resistance against oxidative attack. In addition HCMC treatments add a cellulose size to the paper to increase it's strength. They are simple to use, quick and cost effective and avoid the problems associated with aqueous treatment methods, especially as books may be treated whilst bound without any danger of swelling or breakage of the binding.

The solutions have been in use for more than a decade by leading libraries and institutions throughout Europe, including the British Library and the Biblioteque Nationale. Papers and documents treated by these solutions have been thoroughly tested by a number of independent institutions.

The solvents used have essentially no effect on paper but, although very few inks are affected, all unknown inks should, in keeping with usual conservation practises, be tested initially for discolouration or feathering etc.

Papers with fibres containing large amounts of lignin, such as newspapers, are naturally pH sensitive and may yellow slightly on treatment ,although this is stable and eventually these will become whiter than untreated material which browns during ageing.

Fluctuations in temperature may result in full containers bulging outwards and sediment may also form in containers left standing but this will disperse as a result of agitation prior to use. Neither occurrence will reduce efficiency.

New legislation means that neither solution contains any CFCs: instead new (non - regulated and safer) solvent carriers are used: as a result drying times have been increased. The higher refractive index of the solvents used means that some papers may now appear to be transparent or greasy upon application but they will revert to normal once dry. In the case of HCMC the new carrier, along with size and active ingredient, has been found to penetrate the paper fibres more thoroughly than before, providing a higher degree of protection.