

Protective Chemical PM-3870



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INTRODUCTION

Properties: PM-3870 is a nonfluorinated water-based product intended for use in the leather industry. The product is an anionic water miscible compound designed to impart water and aqueous stain repellent properties on all types of vulnerable leathers for garments, shoe uppers, and upholstery. The treatment is odorless and proper application of this product has minimal to no influence on the natural feel and look of the leathers.

Use: PM-3870 is an anionic product, it can be used as well in the wet-end operation, e.g. fatliquoring or after treatment operations, as in finishing applications.

Environmental: PM-3870 formulated without fluorine-containing compounds and is therefore not based on PFOA or PFOS. The active ingredient of PM-3870 is not a chlorofluorocarbon (CFC), associated with ozone depletion.

TYPICAL PROPERTIES

Appearance White dispersion.

Typical Analysis 25% Solids.

67% Water.

8% Ethylene Glycol

Charge Anionic.

Density 1.01 kg/l

pH 6

Shipping & Storage Non-Red Label.

Flash point: Not applicable.

Boiling point: 100°C (212°F)

PM-3870 should not be stored at temperatures >40°C (>104°F).

PM-3870 is freeze/thaw stable to -23°C (-10°F)

If exposed to freezing temperatures, return slowly to room temperature before using; avoid agitation during thawing process.



TYPICAL APPLICATION

DRUM APPLICATION

The most appropriate application procedure will depend on the leather article, the nature of the raw material, and on the specific tannery processes.

In general, two typical application procedures are recommended: application in the fatliquoring float, or application as an after treatment in a new float. It is also possible to use a combination of both processes to optimize the performance results.

After treatment. The after treatment is done after all the normal wet end processes are completed. For this type of application 2.5% PM-3870, based on shaved weight, is added to a new float. The new float is typically 200% to 1000% water, preferably with a pH of minimum 4, and a temperature around 50°C. Under these conditions, the exhaust process is typically completed after 45 minutes. After the exhaust of PM-3870, the float is preferably acidified with formic acid to a pH of approximately 3.5, using standard tannery procedures. Finally, the float is drained and the leather washed according to normal tannery procedures.

In case waterproof leather is produced, and a chrome fixation is required, PM-3870 can be applied before or after the chrome fixation process.

Application during the fatliquoring process: For this process 2.5% PM-3870, based on shaved weight, can be applied before, after, or together with the fatliquors in the same float, without further modification to the leather production process. This process results in a better penetration of PM-3870 in the leather structure, which can be advantageous for the production of waterproof leather or nubuck leather via the direct process.

Remarks:

PM-3870 is preferably diluted with water, before addition to the drum.

Hydrophobic fatliquors are recommended to improve protection, especially regarding dynamic water repellency.

If PM-3870 is mixed with other leather chemicals, or if PM-3870 is used in the same float with other leather chemicals, it is highly recommended to check the compatibility of the used materials.

The stability of diluted PM-3870 is affected by the hardness of the water. It is recommended to avoid the use of water with more than 20 German degrees hardness.

FINISHING APPLICATION

1. Industrial Spray

It is necessary to dilute PM-3870 with water prior to use. In a spray application, any equipment capable of delivering a wet spray to the leather surface is satisfactory. Spray equipment must be equipped with local exhaust ventilation. Apply a uniform wet coating to ensure an even distribution of chemical. Spray two crosses with a total consumption of approximately 10–12g diluted PM-3870 per sq. ft.

Suggested dilution (by weight):

75–100g	PM-3870
925–900g	Water

Some co-solvents may be used to improve wetting of the sprayed blend (e.g. ethylene glycol, methoxypropanol, and butyl glycol).

Remarks:

- PM-3870 is miscible with water in all ratios.
- PM-3870 can be diluted with hard water of maximum 20 German degrees hardness.





DRY AND CURE CONDITIONS

In general, the normal tannery procedures are adequate. In order to develop the maximum performance, the leathers should be properly dried in an oven of a minimum 50°C (120°F).

ENVIRONMENTAL HEALTH AND SAFETY

Normal care should be taken to avoid skin contact, eye contact and prolonged breathing of vapors or dusts. Hands should be washed prior to smoking or eating. Before using this product, please read the current PM-3870 Safety Data Sheet (available through your local representative), and the precautionary statement on the product package. Follow all applicable directions.

IMPORTANT NOTICE TO PURCHASER:

The information in this publication is based on the tests we believe are reliable. Your results may vary due to differences in test type and conditions. You must evaluate and determine whether the product is suitable for your intended application. Since conditions of product use are outside of our control and vary widely, the following is made in lieu of all express or implied warranties (including the warranties of merchantability or fitness for a particular purpose). Except where prohibited by law, 3M's only obligation and only remedy is replacement or, at 3M's option, refund of the original purchase price of the product that is shown to have been defective when you received it. In no case will 3M be liable for any direct, indirect, special, incidental, or consequential damages (including, without limitation, lost profits, goodwill, and business opportunity) based on breach of warranty, condition or contract, negligence, strict tort, or any other legal or equitable theory.



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