

Dartex Coatings Cleaning and Decontamination



There are a vast number of cleaning and disinfection systems on the market, and many are compatible with Dartex Coatings' fabrics, but some are not. The following is a summary of the different methods discussed in the **CDC Guideline for Disinfection and Sterilisation in Healthcare facilities, 2008** and also in the **MHRA MAC Manual**, and their impact on Dartex Coatings' fabrics.

Note: Mattress covers are classified as "non critical" under the CDC guidelines, as they are not placed in vivo or in prolonged contact with non intact skin or mucous membranes.

Decontamination/ Sterilisation: Must be used on cleaned surfaces and no residue left which may compromise mattress cover biocompatibility.

Please note that all disinfectants should be used as per the manufacturers instructions to avoid breaches of FIFRA. (The Federal Insecticide, Fungicide, and Rodenticide Act)

Method	% active	pH range suitable	Dwell time	Post application	Comments	Suitable for Dartex fabric
Steam Sterilisation	n/a	neutral	115C 30mins; 121C 15 mins; 126C 10 mins; 134C 3mins	Dry and return to use/ store.	With some fabrics there may be some shrinkage, Please verify compatibility with mattress system prior to recommendation.	✓
Dry heat	n/a	neutral	160C 120 mins; 170C 60 mins; 180C 30 mins		Not suitable for use on Dartex fabrics. Softens coating.	✗
Alcohol	70 typical	-	10 mins (MAC)	Rinse and dry. Avoid pooling.	Coating may swell but this is reversible.	✓
Ethylene Oxide	3		Temperature dependent >30 mins	Toxic residue may remain. Rinse thoroughly and dry	Explosion and toxicity issues. Biocompatibility will be compromised by any residue.	✗
Chlorine and compounds	1000ppm – 5000 ppm	7-9	<10 mins strength and microbial target dependant	Rinse and dry.	Higher concentrations have been suggested for C.Difficile treatment. Has been used with Dartex fabrics for almost 30 years.	✓
Formaldehyde	2-8	5-7	<10 mins	Rinse and dry aqueous. Gas will naturally disperse.	Personnel exposure limits apply. Strong odour.	✓
Glutaraldehyde	2	7.5-8.5	Temperature dependent	Rinse and dry.	Some resistant mycobacteria.	✓
Hydrogen peroxide	3-25%	5-9	<5 mins	Rinse and dry.		✗
Iodophors	75-100ppm	acidic	<20 mins		Staining and acidic species which reduce product lifetime, If exposed, rinse and dry.	✗
Ortho-phthalaldehyde (OPA)	0.55%	7.5	5 mins	Rinse and dry.	Will stain skin.	✓
Peracetic acid	0.2 -0.35		<20 mins	Rinse and dry.		✓
Phenolics	2-12%		10 mins		Not suitable for use on Dartex fabrics. Irreversible swelling of coating	✗
Quaternary Ammonium Compounds	3-15%	7-13	varies		Majority are not suitable as they are too alkaline.	✗

Cleaning:

Ref: MAC Manual June 2006 part 3 p33/37

This recommends that mattress covers are regularly cleaned “as part of a routine and following patient use. Rinsed thoroughly and dry. Mattress should be enclosed in a waterproof cover and routinely inspected for damage”. See also CDC p36.

Cleaning may be effected either by mechanical means at 71⁰C to 95⁰C dependant upon Dartex product type, or by using a manual wiping process. A neutral detergent is suitable for this task and the Cleaning (manual) – non-immersion section (MAC Part 2 p20) describes the full method.

Alcohol, if allowed to ‘pool’, may result in temporary swelling of the cover making it more prone to mechanical damage.