

TEXTILE FACE MASKS HELP TO REDUCE THE SPREAD OF THE COVID-19 VIRUS

Our TEGOTEX® specialties provide the required repellency properties in combination with excellent softness.

BENEFITS

Formulations based on TEGOTEX® RT 2033 for the repellent and TEGOTEX® CS 8080 as softener treatment of the mask fabrics provide the following benefits:

- Improved protection
 - Excellent particle filtration efficiency (Sodium chloride, 3 +/- 0.5 µm)
 - Good water and alcohol repellency
- Excellent breathability
- Good durability in household washing machines
- Extraordinary handfeel to the fabric
- Ecofriendly and fluorine free solution



1 Outer layer

Synthetic water-resistant material limits droplets reaching nose and mouth

2 Middle layer

Synthetic material for filtration and breathability

3 Inner layer

Soft non-woven fabric forms a final absorbent layer that is comfortable to wear



TEGOTEX® RT 2033

TEGOTEX® RT 2033 is a reactive organo modified siloxane with an active content of 33 % in water, which is especially beneficial on cotton-based and cotton-blend products.

HANDLING

TEGOTEX® RT 2033 can be applied as a single component or in combination with other products, like extenders by the exhaust method or by padding.

Due to its very small particle-size distribution, TEGOTEX® RT 2033 is easily dispersible in water.

Dosage depends on the type of fabric and the required performance.

Product must be stirred gently at low shear rate before use.

To avoid foam formation during processing, we recommend using an adequate stirring process. Furthermore DYNOL® 360 as foam destabilizer can be added, either in product or in fleet before processing.



TEGOTEX® CS 8080

TEGOTEX® CS 8080 is a silicone quat with an active content of 80 % in dipropylene glycol, which is especially beneficial on cotton-based and cotton-blend products.

HANDLING

TEGOTEX® CS 8080 must be formulated.

20.0 % CLEAR EMULSION, EASE IN USE

PRODUCT	%
TEGOTEX® CS 8080	25.0
Isotridecanol 12 EO	3.4
Isotridecanol 6 EO	1.7
Acetic acid	0.3
Water	69.6

PROCESSING

Add FAEO and TEGOTEX® CS 8080 into vessel and start to stir. Add water into the above mixture vessel and keep stirring to homogenise the emulsion. Adjust pH value to 5.5 – 6.5 with acetic acid.

TEGOTEX® CS 8080 can be applied by the exhaust method or by padding.

RECOMMENDATION

			Fabric and Dosage				
PRODUCT	ACTIVE MATTER [%]	PROCESS PARAMETERS	COTTON [g/L]	POLYESTER/ COTTON [g/L]	POLYESTER [g/L]	WASHING DURABILITY	HANDFEEL
TEGOTEX® RT 2033	33	Drying: 105 °C/2 min Baking: 160-180 °C/ 0.5-2 min	50–150	70–150	25–100	***	***

STORAGE STABILITY

TEGOTEX® RT 2033 as delivered can be stored between 5 and 35 °C in closed drums for at least 6 months after delivery and must be protected against frost.

RECOMMENDATION

PRODUCT	APPLICATION METHOD	DOSAGE OF EMULSION [g/L]	PROCESS PARAMETERS	HANDFEEL
TEGOTEX® CS 8080	Padding	20–50	Drying: 105 °C/2 min Baking: 150–180 °C/ 0.5–2 min	***

STORAGE STABILITY

TEGOTEX® CS 8080 can be stored 12 months in original sealed containers at room temperature.

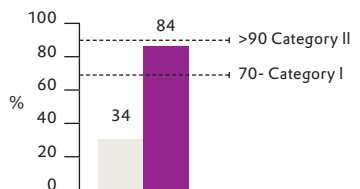
GUIDELINE FOR 3-LAYER NON-WOVEN TEXTILE MASK

TREATMENT TO THE MASK LAYER	PRODUCT	DOSAGE
Outer layer	TEGOTEX® RT 2033 + Extenders	TEGOTEX® RT 2033 – 80 g/L Extenders – 5 g/L
Middle layer	Biocidal coating	Depending on grade
Inner layer	TEGOTEX® CS 8080	20 – 50 g/L

PHYSICAL PROPERTIES OF TREATED MASK AS PER CWA 17553:2020 – PERFORMANCE

TEST METHOD	PASS STANDARD	UNTREATED MASK	TREATED MASK
Breathability (EN 14683)	>150 l/m ² /sec	377 (l/m ² /sec)	310 (l/m ² /sec)
Particulate Filtration Efficiency (EN 13274-7 Section 6)	Category I - ≥70 % -90 % Category II - ≥ 90 %	34 %	84 %
Water/Alcohol resistance (AATCC 193-2017)	On the scale 0 – 6	0	3
Water repellence (ISO 193)	On the scale 0 – 5	0	4

PARTICLE FILTRATION EFFICIENCY (EN 13274-7 SECTION 6)



Disclaimer

This information and all further technical advice are based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

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