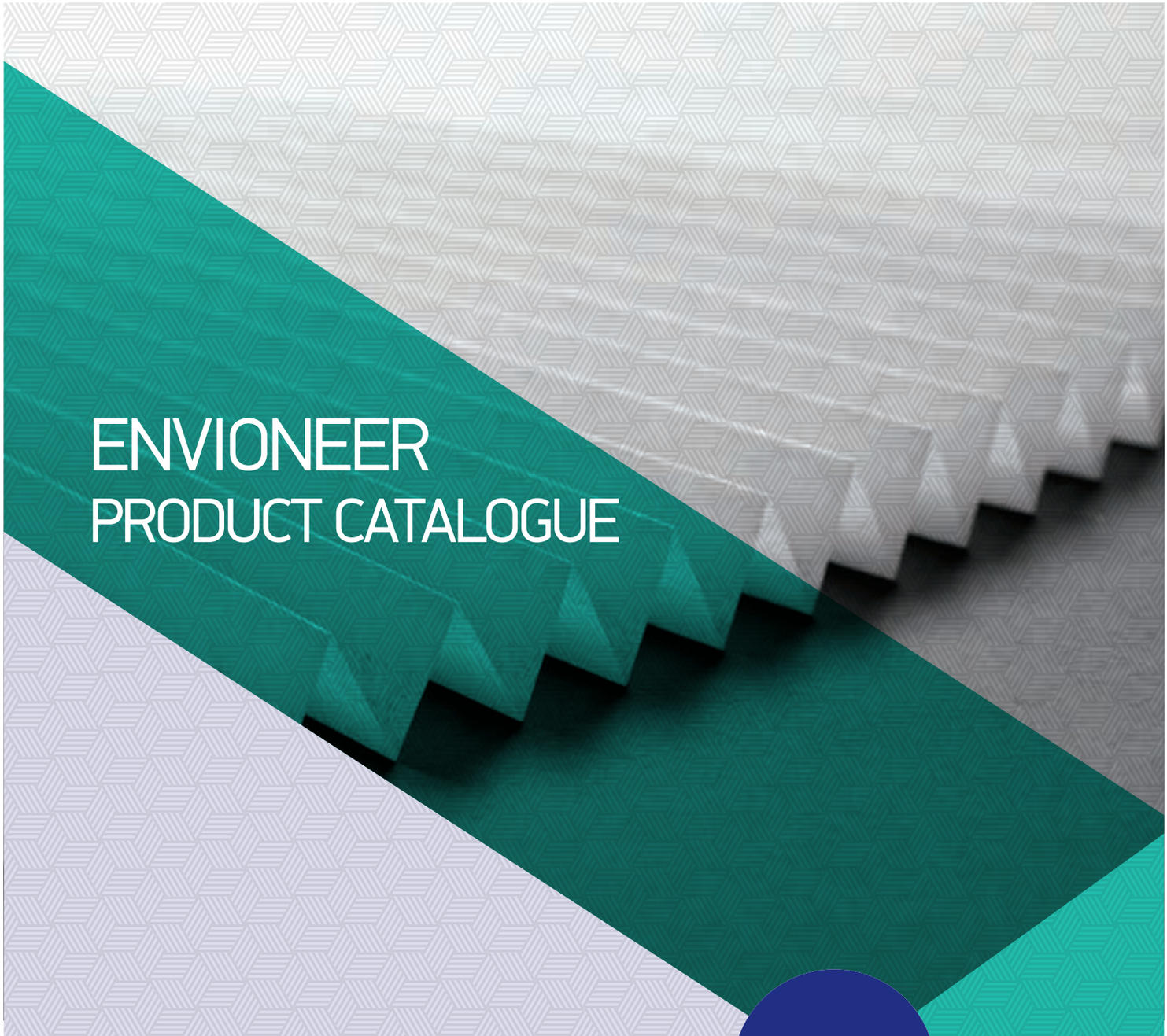
ENVIONEER
PRODUCT CATALOGUE



A Nonwoven Specialist in

AIR FILTRATION
LIQUID FILTRATION
FOOD & BEVERAGE
AUTOMOTIVE
BUILDING MATERIALS

ENVIONEER

ENVIRONMENT + PIONEER = ENVIONEER

Envioneer will continue to make endless efforts to develop as a corporation that satisfies the pioneering role in the prevention of environmental contamination.

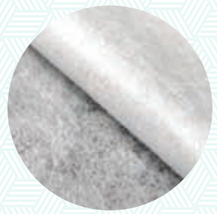
Envioneer Co., Ltd.
is leading global engineered materials company, thoroughly focused in the development and production of wet-laid nonwovens to satisfy the diverse needs and requirements from the customers.

We are fully committed ourselves to operating the company with an integrated management system in accordance with the strict quality control and environmental management standards of ISO 9001 and 14001.

Using applicable wet-laid technology with selective raw materials (micro-glass fibers, nano-cellulose fibers, activated carbon and synthetic fibers), Envioneer continuously develops and produces various types of nonwoven media.

Our best-in-class, wet-laid nonwoven media is designed for optimal efficiency in the filtration of liquid & gas, building materials, automotive, industrial purposes, as well as in the household sector, to provide customized solutions to our individual customer based on the specialized technology and skills we have accumulated.

- AIR FILTRATION
- LIQUID FILTRATION
- FOOD & BEVERAGE
- AUTOMOTIVE
- BUILDING MATERIALS



ENVIONEER

YOUR PARTNER FOR CLEAN AND GREEN LIFE!

ENVIONEER

NANOPURE-Plus® 2.0

WATER PURIFIER FILTRATION MEDIA

Electropositive Charged Filter media with Cellulose Nanofiber offers superior performance and filtration efficiency for water purification.

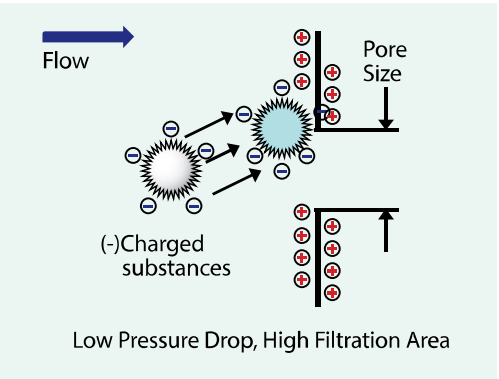
NANOPURE-Plus® 2.0 are manufactured from the natural substances which qualifies the products with innovative filtration technology and strict standards to guarantee the quality of the media, health safety and conservation of the environment.

Features & Benefits

· High filtration efficiency and low pressure drop at increased water flow rate
· Non-woven type filter media, based on cellulose nanofiber with electro positive charge on the surface & inside its pore
· Removal of microorganism such as virus, bacteria and cyst
· Providing healthy water with essential minerals that are crucial for human health
· Various types of filter assembly available

Applications

· Counter top & Under sink
· Faucet type water purifier
· Pre filtration of RO membrane filter
· Food & Beverage



[Charge modified media]

NANOPURE-Plus® 2.0

WATER PURIFIER FILTRATION MEDIA

Product	Basis Weight (g/m²)	Thickness	Mean Pore Size (μm)	Characteristics	Materials
MWN 010	300	0.7	0.4	Virus Free Passed by FDA	Cellulose Nanofiber
MWN 020	170	0.5	0.7	Anti –Microbial	Cellulose Nanofiber
MWNC 010	300	1	0.6	Virus Free	Cellulose Nanofiber + Activated Carbon
MWNC 020	180	0.8	0.8	Anti –Microbial	Cellulose Nanofiber + Activated Carbon

The above mentioned are average values taken from our production facility. Individual values can vary within the common industrial range.

Properties

Electropositive Filter Media

Attracting electronegatively charged microbes
to the positively charged surface where the microbes will irreversibly stick

Cellulose Nanofiber

Concerning both human health and conservation of the environment
by applying eco-friendly cellulose nanofiber

Effective in Microbiological Filtration

Four log reduction(99.99%) observed in both bacteria and virus

Safety

Achieving all satisfactory results by Korea water purifier standard
requirements tests & complies with FDA 21 CFR approvals

[Water purifier filter]

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com

ENVIONEER

ENVIONEER

ENPURE-Plus®

LIQUID FILTRATION MEDIA

Unique electropositive addition technology offers high performance filtration.

ENPURE-Plus® offers a wide selection of electro positively charged filter media in industrial markets where filtration accuracy is crucial. We manufacture media designed to capture and adsorb particles well under natural water pressure condition, thereby providing clean and healthy water.

Features & Benefits

· Low overall pressure drop and increased dirt capacity
· Requiring only natural water pressure but pressure pump for filtration
· Various types of filter assembly available
· Different grades of pore size available

Applications

· Pharmaceutical & biomedical
· Micro-electronics
· Pitchers, dispensers and bottled type water purifier

[MF pleated filter cartridge]

ENPURE-Plus®

LIQUID FILTRATION MEDIA

Product	Basis Weight (g/m²)	Thickness	Mean Pore Size (μm)	Characteristics	Materials
MWS 200	75	0.5	3.0		Microglassfiber
MWS 100	70	0.5	1.5		Microglassfiber
MWS 050	75	0.5	1.3		Microglassfiber
MWS 080	75	0.5	1.2		Microglassfiber
MWS 045	95	0.6	1.0		Microglassfiber
MWS 020	95	0.6	0.85	Bacteria Free NSF Certification	Microglassfiber
MWS 010	190	1.2	0.5	Virus Free	Microglassfiber
MWC 250	250	0.9	0.7	Bacteria Free WQA Certification	Microglassfiber + Activated Carbon

The above mentioned are average values taken from our production facility. Individual values can vary within the common industrial range.

Properties

Electropositive Filter Media

Removing particles that are smaller than the pore size via electropositive charge on the surface of media and inside its pore

Low Pressure Drop

Highly adaptable to gravity-driven type water purification devices such as water bottles and pitchers

Safety

Acquired NSF and WQA certification
Certified NSF/ANSI 42 (material safety) only for products
Tested FDA 21 CFR approvals for MWS 020 & MWC 250

NSF

Filter cartridge has been Tested and Certified by NSF International against NSF/ANSI 42 for material requirements only.

COMPONENT

TESTED AND CERTIFIED UNDER INDUSTRY STANDARDS
WaterQuality

C

The MWC250 and MWC150 models have been tested and certified by Water Quality Association to NSF/ANSI 42 for material safety only

COMPONENT

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com

ENVIONEER

ENVIONEER

FILTRATION SUPPORT MEDIA

Wet-laid bi-component polyester nonwovens are specified for wide range of filter media.

A thin filter supporter produced from wet-laid bi-component polyester fibers offers high air permeability, superior dust-holding capacity and low tolerances. All products have high stiffness and stability under both dry and wet conditions.

Features & Benefits

· Suitable for use in both direct filtration or as a reinforcement material for main filter media
· Uniform pore sizes and constant basis weight across filter media
· Assuring the quality improvement by sandwiched filter media with filtration support media
· Designed to create sharp and stable pleats with standard pleating equipment for an increased filter performance
· Two classifications available, binder free media & binder additive media
· Binder free media for general filter & binder additive media for filter requiring high stiffness

Applications

· Air/Cabin/HAVC filter
· Liquid filter

[HEPA filter]

FILTRATION SUPPORT MEDIA

Test Standard	TAPPI T410	TAPPI T411	ASTM D737	ASTM D737	TAPPI T543	
Item Grade	Basis Weight (g/m^2)	Thickness (mm)	Air Permeability (cfm)	Resistance (mmAq)	Stiffness (mg)	Remark
MAS 1150	50	0.23	618	0.1	310	Without Binder
MAS 1160	60	0.25	425	0.2	345	
MAS 1170	70	0.27	384	0.2	666	
MAS 1180	80	0.29	270	0.4	710	
MAS 1250	50	0.32	705	0.1	355	With Binder
MAS 1260	60	0.34	444	0.2	610	
MAS 1270	70	0.42	432	0.2	1010	

The above mentioned are average values taken from our production facility. Individual values can vary within the common industrial range.

Properties

Uniform opened structure

Lowering the pressure drop by increased air permeability

High stiffness and stability

Improving pleating performance by high stiffness and stability of filter media

Create sharp and stable pleats

Allowing various pleat sizes and shapes to be formed by excellent pleatability

Tunable bi-component filament composition

Ensuring the best properties for specific filter media and/or filter applications

Safety

Complying with RoHS and 19 species of hazardous matter test approvals

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com

ENVIONEER

ENVIONEER

LIGHT-WEIGHT NONWOVENS

Light-weight nonwovens offer equalized porosity performance and uniformity.

Wet-laid nonwovens are a media of choice for critical applications in markets where light-weight is most important. Superior light-weight and high performance nonwovens developed to reduce the weight and improve the safety and comfort significantly in automotive, building and electronic fields.

Features & Benefits

· Excellent in shock, noise absorption and corrosion resistance, as well as high tensile strength
· Ability to increase energy savings and emission reduction by lowering the weight
· Use of wet-laid technology to ensure uniform pore sizes and constant basis weight across the filter media
· Improved material performance, cost savings and weight reductions

Applications

· Automotive materials
  - Underbody cover
  - Headliner
  - Package tray
· Electronics materials
  - TV back cover

· Building materials
  - Sandwich panel
  - Building wall panel
  - Facade

[Automotive underbody cover]

LIGHT-WEIGHT NONWOVENS

Product	Basis Weight (g/m²)	Materials	Colours
MCS 1150	150	PET	Black / White
MCS 1240	240	PET	
MCS 1300	300	PET	
MCS 2150	150	GF + PET	
MCS 2240	240	GF + PET	
MCS 2300	300	GF + PET	
MCS 2400	400	GF + PET	
MCS 2600	600	GF + PET	

Test Standard
1) TAPPI T410

Properties

Excellent in moldability, durability and high stiffness

Available to fit in the process of manufacturing products that can be thermoformed at low pressure, while ensuring excellent durability and rigidity

Cost savings for energy

Significant improvements in fuel economy by reducing the weight

Ability to provide various functionality

Available with flame retardant and water repellent functions to fit in any products

Safety

Improved odor and VOCs by reducing use of adhesive

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com

ENVIONEER

ENVIONEER

FLAME RETARDANT NONWOVENS

SAFETY

Flame retardant nonwovens are expert in delaying the speed of heat and fire.

Flame retardant nonwovens are specialized at limiting the spread of fire, or even extinguishing the fire. The manufacturing process of flame retardant nonwovens by the wet-laid technology offers precise uniformity and superior quality amongst others.

Features & Benefits

· Coated with flame retardant chemistry on the surface of the media
· Achieved all satisfactory results by Korea flame retardancy, smoke density and the semi-fireproof (grade 2 of flame retardant) tests
· Wide range of basis weights from 30gsm to 250gsm
· Available in white and black colours
· Suitable for use in wet conditions by preventing intense colour loss
· No hazardous substances

Applications

· Furniture
· Construction region
· Building materials
  - Sandwich panel
  - Heading material

[Flame retardant nonwovens delay the spread of fire]

FLAME RETARDANT NONWOVENS

Classification		ENV-White	ENV-Black	Method
Main Material		Cellulose + Glass Fiber		
Basis Weight	gsm	62	53	KS K ISO 9864
Thickness	mm	0.22	0.19	KS K ISO 9863-1
Tensile Strength	N/25mm	15	40	KS K 0743
Air Permeability	CFM	135	107	ASTM D 737
Flame Retardant	Performance	PASS	PASS	National Fire Agency Notification No. 2017-1
	Smoke Density	PASS	PASS	ASTM E662-17
	Semi-non-combustible	PASS	PASS	KS F ISO 5660-1 KS F 2271
Surface Colour		White	Black	
Colour fall out (in wet conditions)		X	X	

All test methods are performed with reference to the KS standards.
Their detailed procedure are regulated with internal inspection instructions.

Properties

Stability against heat and fire

Suitable for delaying the spread of fire by coating the surface of the product with flame retardant agents

Various weight available

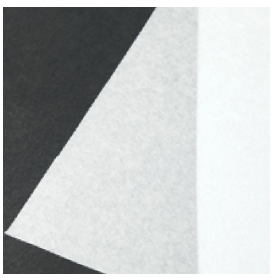
Available in weight ranges from 30gsm to 250gsm

Colour fall out

Suitable for use in wet conditions by preventing intense colour loss

Free of harmful chemicals

Free of hologens and antimony



[Black & White colour availiable]

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com

ENVIONEER

ENVIONEER

SOUND ABSORPTION NONWOVENS

Sound absorption nonwovens improve the working environment significantly by unique sound absorption properties.

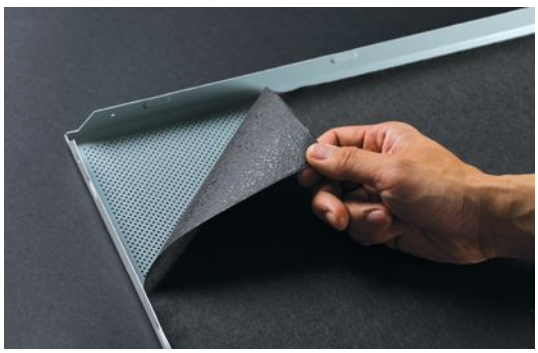
Sound absorption nonwovens are effective in reducing noises which can be applied in a wide range of applications such as wall panels, suspended ceilings and hard floor underlay. Our sound absorption nonwovens are coated with adhesive in order to attached easily on the various surfaces.

Features & Benefits

· Non-woven fabric with thin thickness and light weight
· Achieved high sound absorption rate of NRC standard, 0.72 (ASTM C423-17)
· Ability to attach easily on various products by applying adhesive (celling, steel, wood, panel and walls)
· Suitable for use in wet conditions by preventing intense colour loss
· Achieved all satisfactory results by Korea flame retardancy, smoke density and the semi-fireproof (grade 2 of flame retardant) tests

Applications

· Subway & Airport
· Sound box & Karaoke
· Building materials
  - Ceilings/Walls/Partitions
· Steel & Wood panel



[Sound absorption nonwovens with ceiling board]

SOUND ABSORPTION NONWOVENS

Classification		ENV-Sound Free	Method
Main Materials		Cellulose + Glass Fiber	
Basis Weight	gsm	65	KS K ISO 9864
Thickness	mm	0.23	KS K ISO 9863-1
Tensile Strength	N/25mm	35	KS K 0743
Air Permeability	CFM	80	ASTM D 737
NRC (attached with panel)		0.72	ASTM C423-17
Flame Retardant	Performance	PASS	National Fire Agency Notification No. 2017-1
	Smoke Density	PASS	ASTM E662-17
	Semi-non-combustible	PASS	KS F ISO 5660-1 KS F 2271
Surface	Adhesive	O	
	Colour	Black	
Colour fall out (in wet conditions)		X	

All test methods are performed with reference to the KS standards.
Their detailed procedure are regulated with internal inspection instructions.

Properties

Thin & light nonwoven

Thin thickness and light weight nonwoven

Easy-to-attach anywhere

Ability to attach easily on various products

High sound absorption

Noise reduction effect by sound absorption

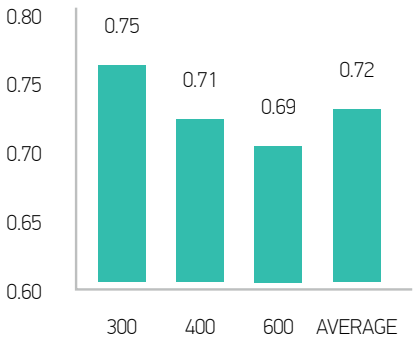
Colour fall out

Suitable for use in wet conditions by preventing intense colour loss

Strong stability against heat and fire

Specialized at limiting the spread or even extinguishing the fire

Sound Free (NRC)



[Average NRC value]

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com

ENVIONEER

ISO 9001 : 2008

ISO 14001 : 2004

ENVIONEER

HEADQUARTERS

(Jeonja-dong, Baekgung Plaza II) 604, 158, Jeongjail-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea

JECHEON FACTORY

(Wangam-dong) 85, Hanbang Expo-ro, Jecheon-si, Chungcheongbuk-do, Korea

T. +82-31-716-3670 F. +82-31-726-3673 E. sales@envioneer.com H. www.envioneer.com