New screen mesh from NBC →→→ NAFITEC

Nafitec **--- Patented nano-particles fixing technology to any of plastic screen mesh**

Inorganic nano-particles fixing/coating technology developed by NBC

Nafitec is named because inorganic Nano (**Na**no) particle is fixed (**Fi**x) on the surface of the mesh using new technology (**Tec**hnology).

- Outline of new technology Nafitec

Nafitec is a technology that makes the inorganic Nano particle fixed on the surface of the mesh material which consists of many kinds of resin. The mesh can be used for the filtration cloth, screen/sieve mesh and other filters.

Fig. 1 shows the previous method to fix the inorganic Nano particle by mixing them with binder. The particle filling method had been generally used for the resin binder and the resin base material so far. By this method, as the Nano particles were covered with the binder or the resin base material, the Nano particles were not able to show an original characteristic enough.

Fig. 2 shows the newly developed **Nafitec** technology that has solved the above- mentioned previous problem. It is the original technology to unite the surface of the resin and the binder introduced onto the surface of the particles chemically without covering/decreasing the original characteristic of the inorganic Nano particle by the binder element. And it also unites Nano particles chemically mutually.

In our life, there are so many kinds of dust, such as the fine particles of soil/sand, the natural particles of pollen, the food particles of wheat/cone flour and so on. The most peculiar characteristic of **Nafitec** excels in the dedusting character that can keep screen mesh away from these dust and can make the mesh cleaning maintenance easy, that dust can be easily removed by the slight impulse even if adheres to the mesh. **Photo 1 & 2** show the example of cotton lint dust, and **Photo 3 & 4**. show the example of pollen dust.

Graph 1 shows how strong the thin layer obtained by **Nafitec** is. It has already been examined & confirmed that the **Nafitec** thin layer has more adhesion strength to the surface of the base material than the previous dry method by about four times

Graph 2 shows Nafitec can make the function/characteristic appear, which the inorganic Nano particles originally have. This will enable you to develop the new materials which keep the original function, which are various characteristics, such as sterilization/anti-bacterium, minus ion generation, super-hydrophile, and the interception of near-infrared ray, etc.

Previous method- to fix the inorganic Nano particle by mixing them with binder.

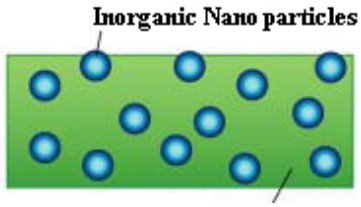


Fig. 1 The previous dry method

Nafitec – to co coat the base resin surface with the inorganic Nano particles

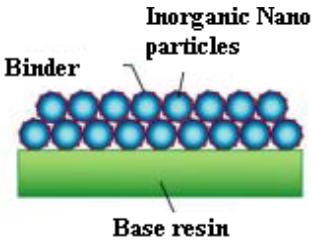
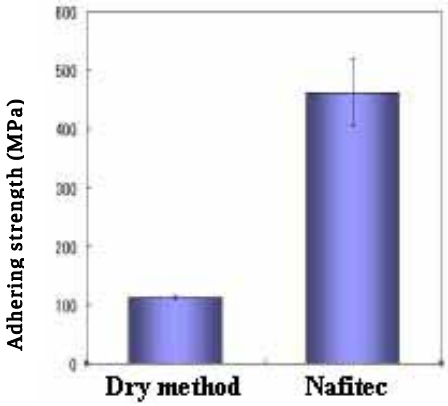
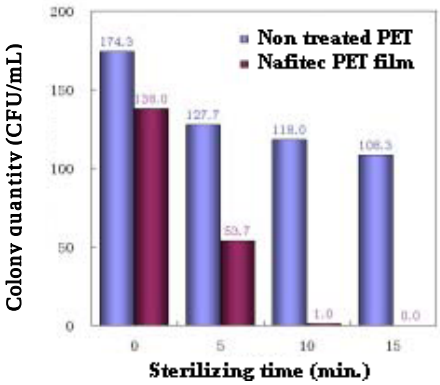


Fig. 2 Nafitec



Graph 1 Adhering strength graph



Graph 2 Sterilization
(at the Ti02 Nano particles fixation)

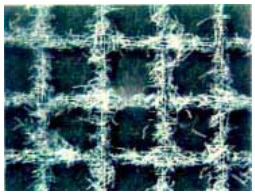


Photo 1 Dust removal
- dry method
(Dust: cotton lint, Base material: Polyester)

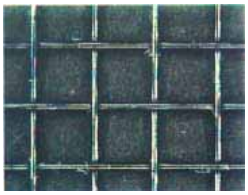


Photo 2 Dust removal
- Nafitec
(Dust: cotton lint, Base material: Polyester)

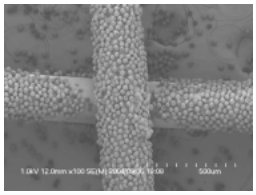


Photo 3 Dust removal
- dry method
(Dust: pollen, Base material: Polyester)

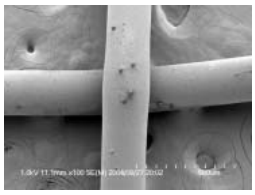


Photo 4 Dust removal
- Nafitec
(Dust: pollen, Base material: Polyester)

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