

Neoflon® ETFE COATING POWDER EC-6820

Characteristics

Neoflon® ETFE is a copolymer of tetrafluoroethylene and ethylene. It is extremely easy to process. It offers outstanding electric and chemical properties. In particular, it excels not only in mechanical strength but also in chemical, thermal and electrical properties, usable in various environments.

Neoflon® ETFE Coating Powder can meet a wide range of needs in various fields.

Application example:
Chemical reactors and pipes

Properties*	Unit	Neoflon® FEP EC-6820
Powder appearance	--	White
Average particle size	micron	210
Bulk density	g/ml	0.88
MFR	g/10min	29.4
Application	--	Rotational-lining/molding
Film appearance	--	Clear
Available film thickness	micron	500 - 4000

* Typical properties are not suitable for specification purposes.

Processing

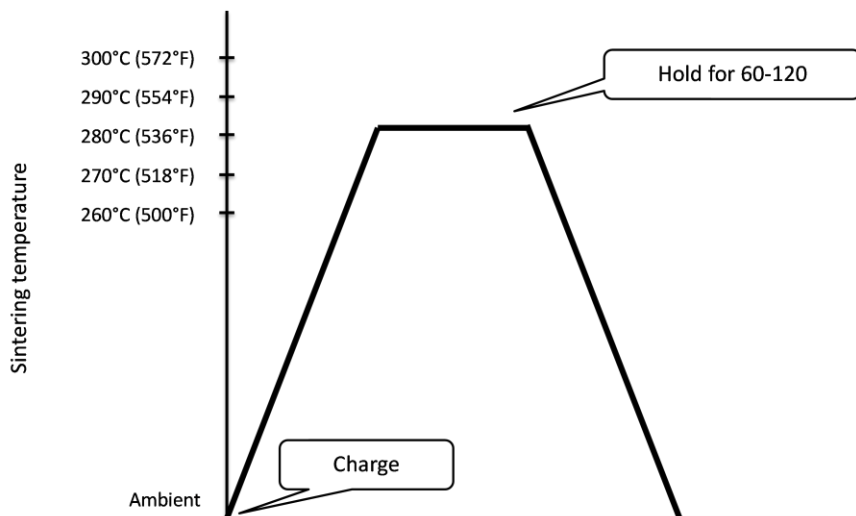
It is necessary to apply a release agent to the inside of mold prior to roto-molding. On the other hand, it is necessary to apply a primer for roto-lining to promote adhesion.

EC-6820 can be sintered at 280 - 300°C (536 - 572°F) as the inside temperature of a mold. The sintering temperature is extremely important and should be monitored closely. Otherwise, there may be many ball-like aggregations on the film at lower temperature.

Sintering at higher temperature improves layering of powders, but it is unfavorable. It hinders in the removal of entrapped air among powders, because the inner surface of the layer is melted.

Smoothing at high temperature for a short time should be avoided. It creates great temperature variations between the inside and the inner surface of a mold. Under such conditions, the material on the inner surface of the part degrades and makes bubbles.

Example of temperature control



Chemical Resistance

Chemical	Immersion	Neoflon® ETFE	Weight change (wt%) Competitor's ETFE	Competitor's ECTFE
Hydrochloric acid (35%)	7 days at 80°C (176°F)	+0.1	+0.1	+0.3
Nitric acid (60%)		+0.1	+0.5	+0.3
Acetic acid (50%)		+0.3	+0.3	+0.4
Sodium hypochlorite (5%)		0.0	0.0	+0.1
Sodium hydroxide (50%)		0.0	0.0	0.0
Toluene		+2.4	+2.7	+8.4
Xylene		+1.9	+2.1	+6.7
Octane		+0.7	+1.1	+2.6

Chemical	Immersion	Neoflon® ETFE	Weight change (wt%) Competitor's ETFE	Competitor's ECTFE
Decaline	7 days at 80°C (176°F)	+0.4	+0.4	+2.8
Kerosene		+0.3	+0.4	+1.6
1-Butanol		+0.6	+0.6	+1.2
Methyl isobutyl ketone		+4.0	+3.6	+8.0
Cyclohexanone		+4.0	+3.5	+10.9
Butyl acetate		+4.2	+3.9	+9.8
Butyl cellosolve		+1.0	+0.8	+2.1
Diglyme		+2.4	+2.2	+5.1

Note: Please make sure to read Safety Data Sheet (SDS) before using this product.

Safety Precautions

Do not breathe dust/fume/gas/mist/vapors/spray.

Use personal protective equipment as required.

First Aid

If on skin or hair: Wash with plenty of soap and water.

If in eyes: Rinse cautiously with water for several minutes.

If swallowed: Rinse mouth. Do not induce vomiting.

Get medical advice/attention, if you feel unwell.

Precaution for Use

When the product is over-heated, it will generate decomposition gas. Adequate ventilation is required to prevent inhalation of this gas.

The product is for industrial use only. We do not guarantee the safety in case the product is used for other purposes. When using the product for health-care or food/feed applications, consult Daikin in advance.