

NOVA™ HFC5320

Halogen Free Flame Retardant Polyolefin Compound Resin for Aluminum Composite Panel

CHARACTERISTICS

- Non-Toxic and good flame retardant character
- Excellent flexibility and low density
- Good processibility

APPLICATIONS

- Core material for Aluminium Composite Panel
- Versatile non-flameable building material

Description

NOVA™ HFC5320 is non-halogenated flame retardant compounds including polyolefin resin and inorganic fillers. NOVA™ HFC5320 also offer excellent flame resistance and mechanical property. In addition, they have a good extruding workability (single extruder) and adhesion property.

COMPONENT OF MATERIAL

Polyolefin Resin	Inorganic filler	Others
25 ~ 35%	65 ~ 75%	1 ~ 3%

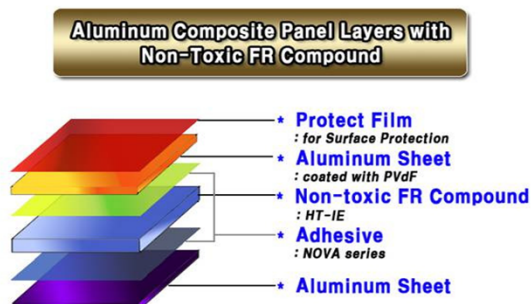
PHSICAL PROPERTIES

Property	Test Method	Unit	Test Value
Melt Index (190±2℃, 10Kg) (190±2℃, 20Kg)	ASTM D1238	g/10 min	15 ± 5
			65 ± 10
Density	ISO 1183-3 ASTM D1505	g/cm ³	1.56 ± 0.03
Vicat Softening Point	ASTM D1525	℃	80
Melting Point (DSC)	ISO 3146	℃	100
	ASTM D3418		
Adhesive Strength*	KS F 4737	N/25mm	150
Incombustibility grade	KS F ISO 5660-1	-	Grade II
	UL94	-	V-0
Noxious gas	KS F 2271	-	Pass

*Adhesion strength : T- Peel strength,

The product described herein is manufactured by TWO H Chem Ltd.
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Application for ACP



Caution

- HFC5320 compounds have hygroscopic nature due to inorganic flame retardant, so they should not be left open.
- If they are left open for a few days, pre-drying is recommended for extrusion.
- They should be dried in a dehumidified dryer or vacuum oven for about 4hrs at 70°C.
- Exposure to high relative humidity should be avoided, since moisture pick-up may cause lots of voids in the extruded product.

Productivity

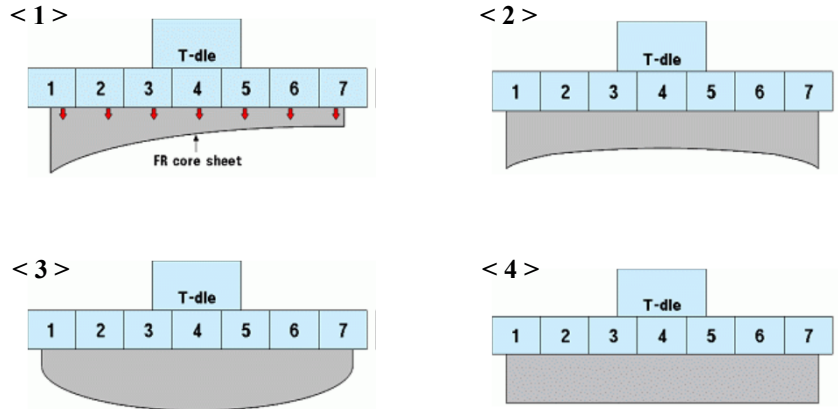
- a) Line speed : 3.0 ± 0.5 m/min (on 1,250mm width)
- b) Capacity of production : $1.25\text{m} \times 3.0\text{m}/\text{min} \times 60\text{min}/\text{hr} = 225 \text{ m}^2/\text{hr}$

Temperature condition of extruder

Zone condition	HT- IE	Glue layer
Feeding zone	160 ± 5 °C	140 ± 5 °C
Melting zone	180 ± 5 °C	160 ± 5 °C
Compression zone	200 ± 5 °C	200 ± 5 °C
Metering zone	210 ± 5 °C	200 ± 5 °C
Screen changer	210 ± 5 °C	210 ± 5 °C
Conductor	210 ± 5 °C	210 ± 5 °C
T- die	210 ± 5 °C	210 ± 5 °C

Operating method

Shape of flow sheet is very important factor to manufacture ACP.



1. T- Die lip control

In case of <1>, <2> and <3>, need to adjust T- Die lip.

- <1> Reducing the left side of T- Die lip
- <2> Reducing the both side of T- Die lip
- <3> Reducing the middle part of T- Die lip
- <4> Most desirable case

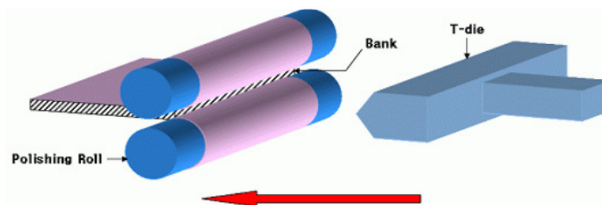
2. T- Die zone temperature control

Observe the surface roughness and melting conditions of DT- IE core sheet and then control T- Die zone temperature.

- <1> Decreasing temperature of the 1~ 3 zone
- <2> Decreasing temperature of the 1~ 2, 6~ 7 zone
- <3> Decreasing temperature of the 4~ 6 zone or increasing temperature of the both side
- <4> Most desirable case

3. Above <1>, <2> and <3> cause following problems

- <1>, <2> : Cause waving of side part and adhesive failure of side part due to waving
- <3> : Cause the unevenness of ACP



Safety and Handling Considerations

Material Safety Data (MSD) sheets for are available from TWO H Chem Ltd. and its distributors. MSD sheets are provided to help customers satisfy their own handling, safety, and disposal needs, and those that may be required by locally applicable health and safety regulations, such as OSHA (U.S.A.), or WHMIS (Canada). MSD sheets are updated regularly; therefore, please request and review the most current MSD sheets before handling or using any product. All users of our products are urged to retain and use the MSDS. The following comments apply only to materials which are used unmodified and processed according to good manufacturing practices; additives, processing aids or other materials used in formulating, fabrication and/or finishing steps have their own safe-use profile and must be investigated separately.

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