

# Ether type plasticizer SOFBAR™ P series

2021.3 (Ver.4)



## 1 Feature

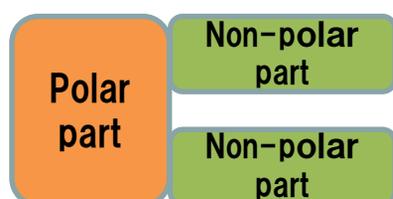
- ◆ Excellent plastic efficiency, and can achieve **both sheet strength and adhesion improvement effects.**
- ◆ It is **100% active ingredient** and does not contain impurities such as alkali metals.
- ◆ It is a **non-phthalic acid ether plasticizer** and does not hydrolyze.
- ◆ **Excellent thermal decomposition** characteristics and does not produce residual charcoal.
- ◆ Products with different polarities can be used according to the resin.

## 2 Lineup and mechanism

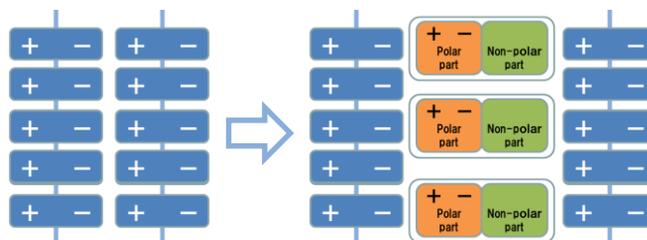
Item	Polarity	Solubility (10 wt% solution, 25°C)					Registration				
		Water	EtOH	Toluene	MEK※1	DHTA※2	Japan	China	Korea	Taiwan	USA
P-0803N	High	○	○	○	○	○					On List
P-0403N	Midium	×	○	○	○	○					On List
P-0303N	Low	×	○	○	○	○					On List

※1 Methyl ethyl ketone ※2 Dihydroterpinyl acetate

### The structural model of plasticizer



### The mechanism of plasticization effect



Plasticizer suppresses the approach of polymer molecules and expands between molecules

## 3 Additive amount (suggested)

The additive amount of SOFBAR™ P series is normally from 10 to 50wt% (for resin weight).

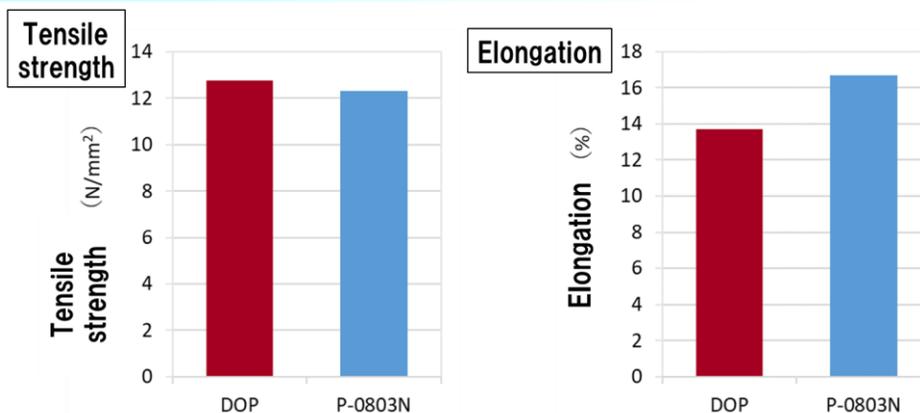
## 4 Sheet composition for evaluation

Composition	Material name	Amount (g)
Dielectric	Barium titanate (size:100nm)	100.0
Dispersant※1	MALIALIM™ SC-0505K	1.5
binder	Polyvinyl butyral	7.0
Plasticizer※2	DOP or P-0803N	2.9
Total	—	111.4

※1:SC-0505K…NOF dispersant

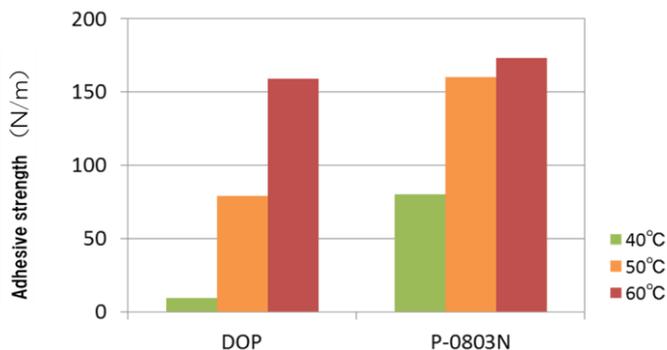
※2:DOP…Diocetyl phthalate, P-0803N…NOF Plasticizer

## 5 Tensile strength and elongation

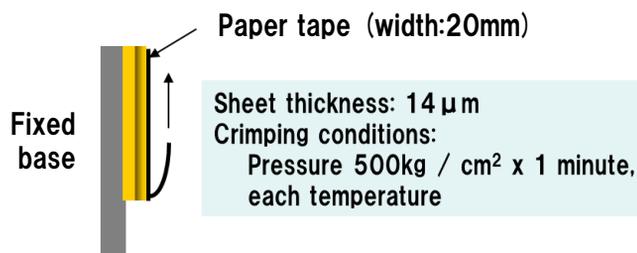


Good elongation can be obtained while maintaining sheet strength

## 6 Adhesive strength

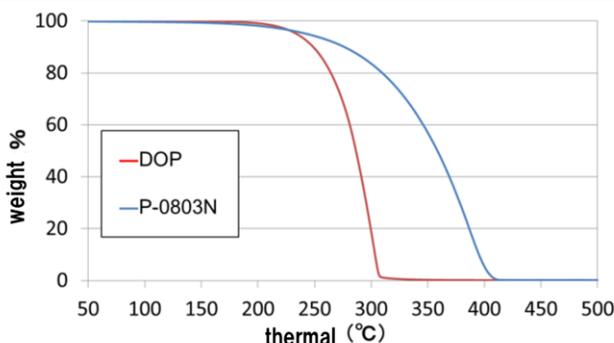


### Bond strength evaluation method



High adhesive strength can be obtained even when crimping at low temperatures.  
→ Suppression of peeling and dimensional deviation between sheets can be expected.

## 7 Thermogravimetric analysis



<N<sub>2</sub>>  
Flow rate : 75mL/min  
Heating rate : 10°C/min

Decomposes completely at about 400°C  
and does not produce residual charcoal

## 8 Other information

This catalogue is made by NOF CORPORATION based on our best knowledge and all of listed data are reference only. (not guaranteed) We recommend to refer our SDS before using our products and special attention should be paid in handling because all chemicals have unknown hazard.

Please contact us when you have any other question.

\*MALIALIM is a trademark of NOF CORPORATION.

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