2023.10

MIYOSHI OIL & FAT CO.,LTD.

Polylactide Resin Dispersion

LANDY PL Series

LANDY PL Series are the water-based PLA dispersions that make easier to use PLA resins.

■ Properties

Product name	Average particle diameter (μm)	Active Ingredients (%)	Viscosity (mPa･s)	Ionicity	Minimum film formation temperature (℃)※
PL-1005	5	40	500	Weak anion	160
PL-3000	1	40	1000	Weak anion	20

※Minimum film formation temperature : Temperature that the film turns clear from white. (Dry by hot air -3minutes) But depends on conditions.

■ Character

You can adjust the coating thickness.

We use 100% biobased PLA resins.

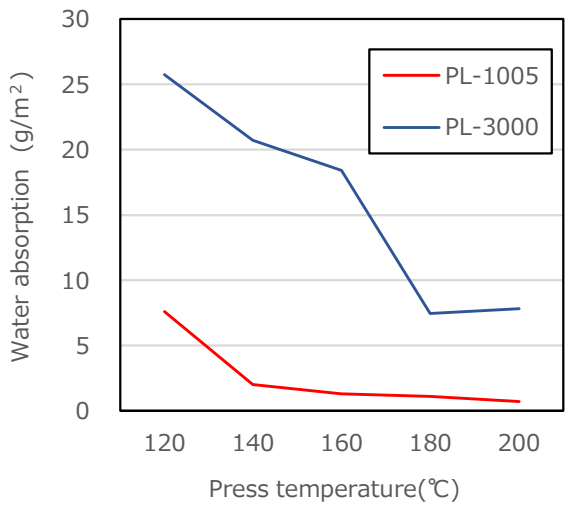
Biodegradable & Biobased Plastics

***LANDY are a biodegradable & biobased plastics product certified by JBPA. (Registration Number : PL-1005/1108　PL-3000/660)**

<Application example>
Adhesive : For civil engineering materials, sanitary materials, household goods, etc.
Coating : For wrapping paper, building materials, agricultural materials.

■ Physical properties

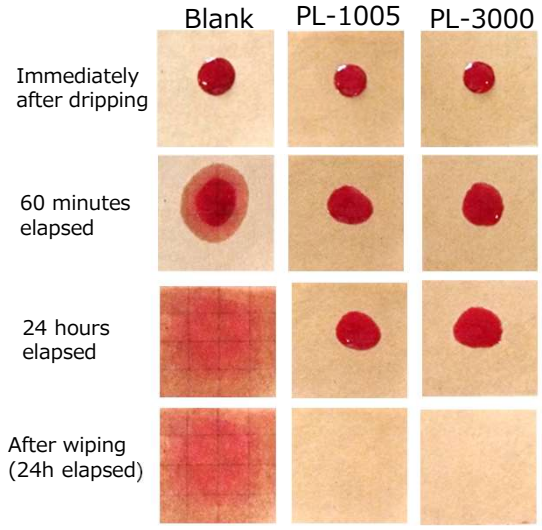
●Cobb water absorption(Kraft paper)



Conditions for making coated paper
Coating weight : 30g/m² (dry)
Press pressure : 0.3kg/cm²　Press time : 3 minutes

Test method
JIS P-8140　Contact time (With water : 1.75minutes)

●Oil resistance(Castor oil)

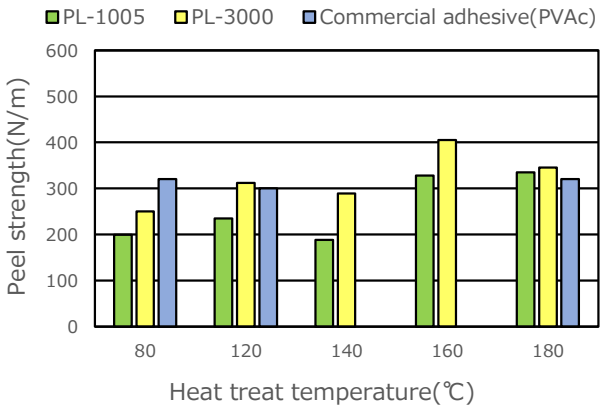


Conditions for making coated paper
Coating weight : 30g/m² (dry)　Press time : 3 minutes
Press pressure : 0.3kg/cm²　Heat temperature : 180℃

Test method
Dropped caster oil on the LANDY coated paper, and visually evaluated appearance over time.

■Adhesion

●Peel Strength (Kraft Paper)

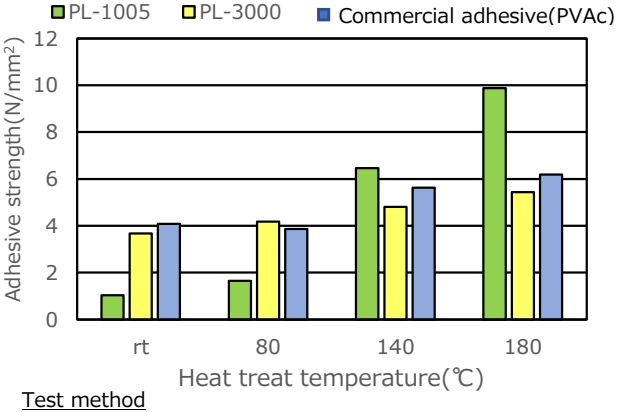


Test method JIS K-6854-3

Pull at 10mm/min, maximum value indicates peel strength.

■Coating weight:30g/m² ■Adhesion between coated surfaces.

●Tensile strength (Cypress)



Test method

Stick 2 pieces of cypress(8×50mm) with dryer.

Pull at 5mm/min, maximum value indicates adhesive strength.

■Adhesion part : 32mm²

■Stick coated surface and uncoated surface.

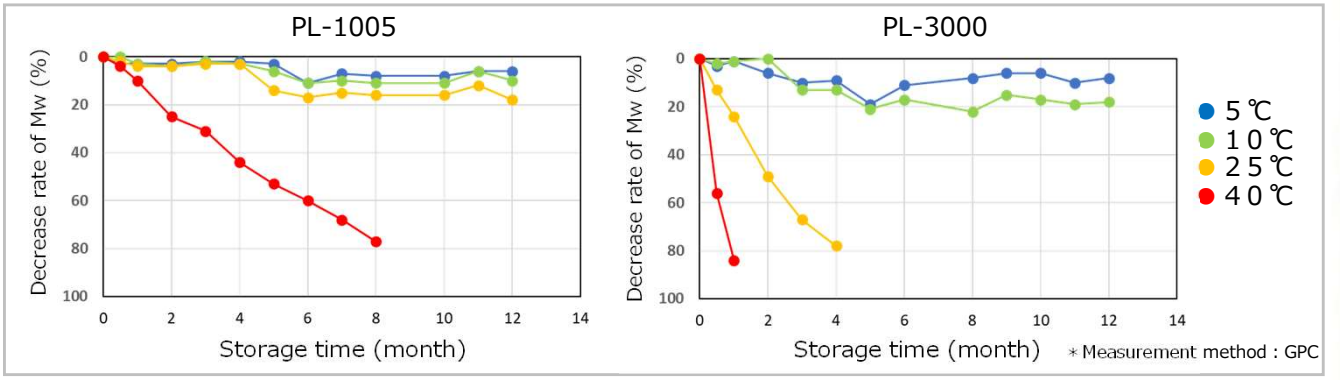
■Film forming property

Samples	Film forming test(℃)								
	20	60	70	80	90	100	110	120	160
PL-1005	×	×	×	×	×	×	×	×	○
PL-1005:PL-3000=6:4	×	×	×	×	×	×	△	△	○
PL-1005:PL-3000=5:5	×	×	×	×	×	△	△	○	○
PL-1005:PL-3000=4:6	×	×	×	×	△	△	○	○	○
PL-1005:PL-3000=3:7	○	○	○	○	○	○	○	○	○
PL-1005:PL-3000=2:8	○	○	○	○	○	○	○	○	○
PL-3000	○	○	○	○	○	○	○	○	○

Evaluation : ○=Formed △=Partially formed ×=Didn't form ※The formation of the clear coating film was defined as film formation.

Test conditions ■Coating thickness : 50μm ■Heating time : 3minutes (dry) ■Base: Black paper

■Correlation between storage temperature and molecular weight



■Cautions when using

There is a possibility that precipitate results since LANDY is PLA dispersions. Please stir before using.
Due to the composition of PLA, storage at high temperature promotes hydrolysis. Please store this at below 10 degrees Celsius.

MIYOSHI OIL & FAT CO.,LTD. **Oleo & Speciality Chemicals Division**

https://www.miyoshi-yushi.co.jp

・When handling products, please make full use of the Material Safety Data Sheet (SDS) issued by our company to prevent accidents caused by chemical substances.

・The product data in this catalog is representative of measured values obtained under our test methods or specified conditions.