

Paper based Biodegradable Resin

paper, recycle paper, paper waste, newspaper scrap,
any kind of paper as raw material

100 % nature derived material, no petroleum

GS BR Paper

Recently, destroying ecology and environmental by plastic pollution is getting severe in the world and especially microplastic problem in the marine environment is becoming a devastating issue. At the moment, it is said that over 150 million tons of plastic garbage exists in the ocean. It is predicted that the amount of plastic garbage will be more than that of fish in the world by 2050. There are some scientific report that these microplastic is already in our human body which should had come from our surrounding environment. Therefore, plastic recycling, reduction of plastic usage itself and biodegradable plastic usage and development, have been intensively attempted and carried out. In this regard, we have successfully made paper based biodegradable plastic. Some grades are composed of 100 % nature nature derived materials. We can use paper, paper waste, newspaper waste, recycle paper as raw material. By using this material, we can promote recycling. We are cling to the idea of creating biodegradable material as harmless as possible to the environment. On top of that, we can make nano cellulose composite with this material since we have CNF (Cellulose Nanofiber) composite technology.

We will keep trying to increase mechanical strength. Also, we will measure other mechanical strength and other thermal properties later and update here. Furthermore, we will also test biodegradability in the soil and ocean in order to obtain biodegradable certificate from Japan and USA, Europe.



Tensile strength

57 - 62 MPa (PLA type)

26 - 30 MPa (PHBV type)

64 - 67 MPa (PLA + CNF type)

29 - 32 MPa (PHBV + CNF type)



No. 1150

Paper + PLA based Biodegradable Resin Material



No. 403



No. 1151

**Paper + CNF(Cellulose Nanofiber) + PLA based
Biodegradable Resin Material**



No. 404