

Phoenix Technologies Grade RPET Resins NLP™ and LNO™P/PT

Technical Processing Information

Recommended Drying Procedures

PET is a very hygroscopic material which readily absorbs moisture when exposed to ambient air. PET which is not properly dried will result in a lower IV and loss of other important physical properties. At time of processing, the moisture in PET must be less than **50 ppm** or 0.005% by weight.

Dry thoroughly in a high heat regenerative–desiccant drying system. **DO NOT** remove dried material from the drying hopper or expose it to ambient conditions prior to processing. Rapid degradation will occur when hot, dry PET is exposed, even briefly, to ambient air.

Recommended Drying Parameters

Drying Time	4-5 hours
Drying air temperature	295-330° F.
Drying air dewpoint	-40° C. / F.
Drying air flow rate	1 CFM per pound per hour processed

The drying temperature used should be kept as low as possible to minimize yellowing by oxidation during this portion of the process.

Material Handling

Phoenix RPET resin is produced from Recycled PET. It shows good material flow characteristics and blends well with major virgin PET resins. For best results blending should be done just prior to drying, and conveying blended materials long distances should be avoided, but Phoenix RPET resin can generally be handled as your virgin PET resin.

Processing Parameters

Phoenix RPET resin can be processed very easily over a wide range of conditions. Typically, processing temperatures range from 530-565° F. The main focus of processing should be to minimize process temperatures and melt residence times in an effort to maintain the molecular weight of the material and minimize any yellowing of the material during processing.

- Use the lowest possible barrel-temperature profile that will produce a clear product.
- Minimize melt-residence time.
- Minimize the back pressure used in extrusion to reduce shearing of the material.
- Use the lowest possible hot runner and nozzle temperature that will produce a clear part.
- Use the lowest possible mold coolant temperature to promote part clarity.

Phoenix Technologies

Our specialization in RPET has allowed us to concentrate all of our time and effort to produce the highest quality, contaminate-free recycled resin which is very close to virgin material in quality and performance.

All of us at Phoenix Technologies want to become your supplier of recycled PET resin and are capable and willing to assist you with specific processing questions on an individual basis. Please feel free to call us at 419-353-RPET.

Material Safety Data Sheets providing safety precautions that should be observed in handling and storing the products mentioned in this publication are available and should be reviewed before handling these products.

Phoenix Technologies International LLC provides NLP™ and LNO™ grade RPET resin to a variety of customers for specific applications depending upon their needs. We are not in the business of advising customers and suppliers generally as to usage of our product, including drying and processing procedures, or to the testing or other methodology which could require modification depending upon the specific applications desired. The above information is furnished without charge as an accommodation to our customers and suppliers and is of general application only. Phoenix Technologies International LLC and its affiliates do not warrant or represent the accuracy of such information in each and every application and disclaim any and all responsibility for the results or consequences of use of such information or the use of any product, method, or apparatus referred to above. It is the responsibility of each customer or user, based on whatever testing criteria it deems appropriate, to determine the suitability of our product or methods for any particular use or purpose.