



Navigation



Extrusion 1-0-Wiki Pages

- [Main Page](#)
- [Best Papers](#)
- [Book Reviews](#)
- [Consultants Corner](#)
- [Extruder Software](#)
- [Extrusion Hints](#)
- [Safety](#)
- [Shop Tools](#)
- [Sponsors](#)
- [Technical Articles](#)

Search the Wiki

Viewing/Creating

- [Random Page](#)
- [Create a new Page](#)
- [All Pages](#)
- [Categories](#)

Account Management

- [Login/Logout](#)
- [Language Selection](#)
- [Your Profile](#)
- [Create Account](#)

Administration

- [Administration](#)
- [File Management](#)

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# What Causes Imperfection in the End Product

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(10) » [Screw Channel Depths](#) » [Developing Profile Extrusions Dies](#) » **What Causes Imperfection in the End Product**

## What Causes Imperfection in the End Product

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Moisture many times is a primary cause of imperfections in the finish product. Let's first discuss the moisture, most of the time the imperfection is due to the fact that the resin has not been dried properly. Drying of resin is a time/temperature element. Most drying specifications for various resins are at temperatures where the resin will not agglomerate and then held for a given amount to time for which the moisture in the resin will be reduced to a processable level. Defects caused by moisture can typically be identified by the fact that it will move around from part to part. It will never be in the same place. The following chart shows typical drying requirements:

- Timothy Womer, Xaloy, Inc.

[Return to Extrusion Hints](#)

Resin	Drying Temp (°F)	Drying Time (Hours)
ABS	170-250	2-4
Acetal (POM)	185	2-3
Acrylic (PMMA)	170	2-4
Cellulose(CA & CAB)	130-180	3-4
Celcon (POM)	180	2-4
Delrin(POM)	185	2-3
Ektar(PET)	250-275	4-6
HIPS	150-170	3-4
Hytrel (Copolyester Elastomer)	180-210	2-3
Lexan (PC)	250	3-4
LCP(Ticona)	300	4
Noryl(PPE)	220-230	3-4
Nylon 6	180-220	4-6
Nylon 6/6	180-220	4-6
Nylon 6/10	180-220	3-5
Nylon 11	185	3-5
Nylon 12	185	3-5
Nylon 6/6 30%GF	170-185	3-5
PBT	250-300	3-6
PEEK	300-320	2-4
PET	270-320	2-4
PETG	220-270	2-4
PC-Polycarbonate	250	3-4
HDPE	150	3-4
LDPE	150	3-4
LLDPE	150	3-4
MDPE	150	3-4
PP-Polypropylene	176	2-3
PP w/mineral filled	176	2-3
PS (GPPS)	170	2-3
PPS	300	3-6
PVC	150	2-3
CPVC	150	2-3
FPVC	150	2-3
RPVC	150	2-3
Rynite(PET)	270-320	2-4
Surlyn(Ionomer)	140-175	3-4
Teflon (FEP)	300	2-4
TPO	150-225	4-6
PU (Polyurethane)	176	3-4
Xenoy(PC/PBT)	230	4-6

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