

MOLDLAY / wax-alike / for lost wax casting / permanent mold casting

MOLDLAY

a wax-alike thermoplastic 3D printing filament

1. for lost wax casting / investment casting
2. for permanent mold casting



1 LOST WAX CASTING INVESTMENT CASTING



f.e. bronze, silver, alu

2 PERMANENT MOLD CASTING



f.e. 2-component resins

MOLDLAY is a wax-alike thermoplastic 3D printing filament

(burn out at low temperatures)

dedicated for two main casting methods:

1. lost mold ; lost wax casting; investment casting; (used for metal casting)
2. permanent mold casting (used for 2K resins)

MOLDLAY is

super dimension stabil, stiff, rigid at room temperature, near zero warp, printable without heated bed, print at 200° C +/- 20°C, let your heated bed cold = 20°C max !!!

use HIPS-tape + ABS paint or other, it sticks well;

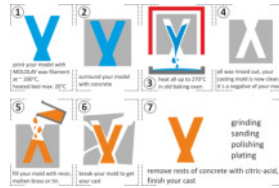
density: ~ 1.2 g/cm3

tensile strenght: ~ 40 N/mm2

contains harmless co-polyesters + wax and oils

casting:

treat your mold at ~ 270°C , in an old baking oven only, your object made from Moldlay flows restless out the mold, similar as hot paraffin, look for this scheme; (bigger at the end of these sheets)



MOLDLAY

(1) lost wax casting / investment casting



torso while being printed with a delta-printer



printed Torso (blue) embedded in molding material (grey), below one brown casting channel



right: statue from Moldlay with casting channels
left: ready casted and polished bronze statue



statue at exhibition

MOLDLAY

(2) permanent mold casting

<http://www.3ders.org/articles/20150128-filament-wizard-kai-parthy-unveils-his-new-moldlay-wax-3d-printing-filament.html>

<https://3dprintingindustry.com/news/industrial-manufacturing-desktop-new-moldlay-3d-printing-filament-42481/>

<https://www.youtube.com/watch?v=3RdwKWXnBrM>

<https://3druck.com/3d-druckmaterialien/moldlay-kai-parthy-stellt-filament-fuer-giessverfahren-vor-5129578/>

(3)



form printed from Moldlay (blue) filled with a 2K resin (pink)



opened form



hardened 2K resin

How lost wax casting works with MOLDLAY wax-filament

①



print your model with MOLDLAY wax-filament at ~ 200°C, heated bed max: 20°C

②



surround your model with concrete

③



heat all up to 270°C in old baking oven

④



all wax rinsed out, your casting mold is now clean, it's a negative of your model

⑤



fill your mold with resin, molten brass or tin

⑥



break your mold to get your cast

⑦



remove rests of concrete with citric-acid, finish your cast

grinding
sanding
polishing
plating