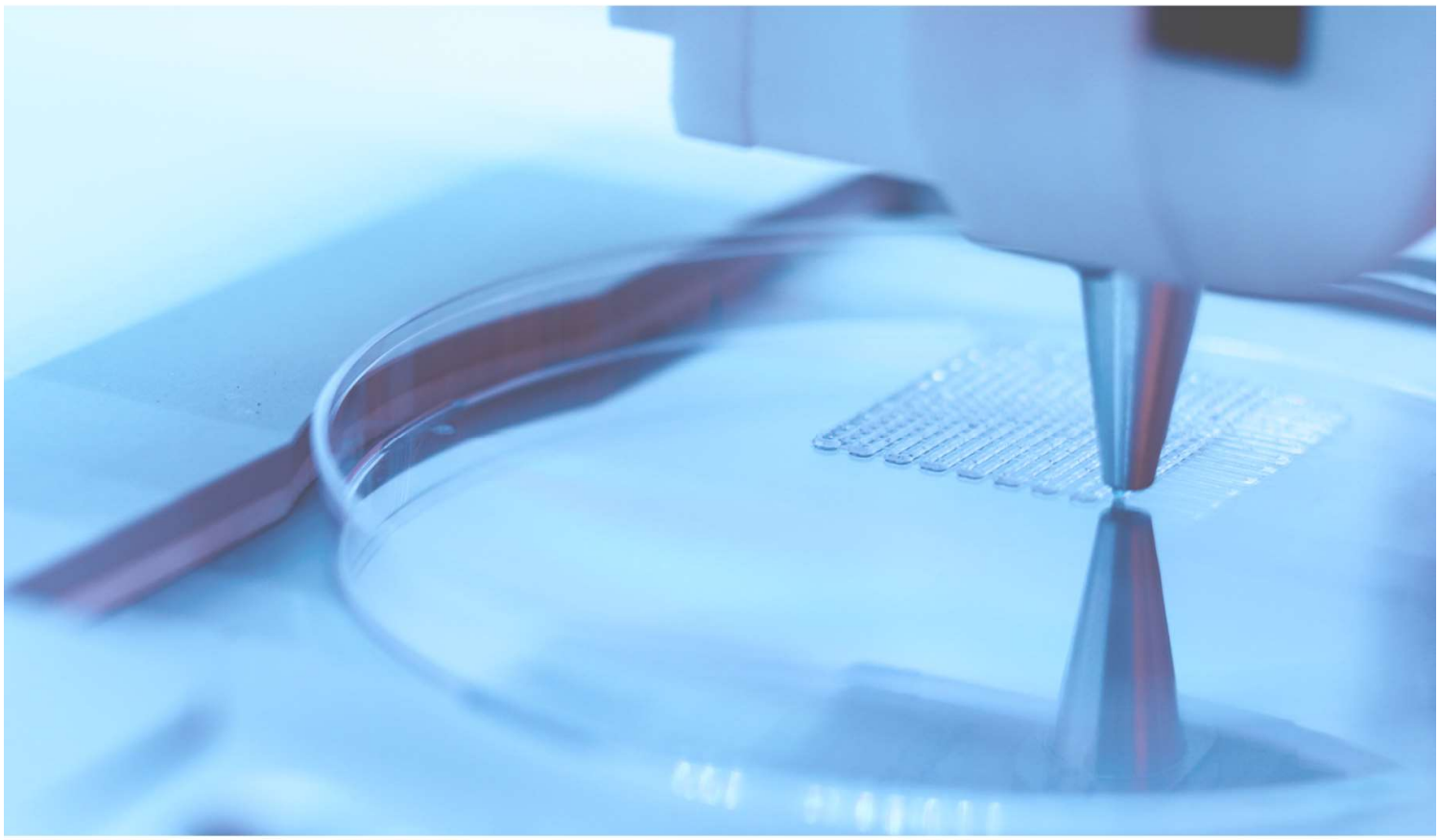
BIOINX®



User Guidelines for

SOLIDINX© X100

SOLID INX X100

General Information

Storage

Product is provided as an off-white solid in a prefilled cartridge of 3 ml. Solid Inx should be stored at 4˚C. Protect it from light. Expiry date of the product is indicated on the sealed pouch. The product can be stored for a maximum of 3 months after opening and should be consumed before the expiry date.

Intended Use

Research use only. This product is not intended for use in diagnostic or therapeutic procedures.

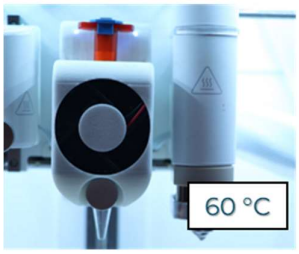
Safety Information

For more information, please refer to the material safety data sheet.

User Guidelines

Preparation

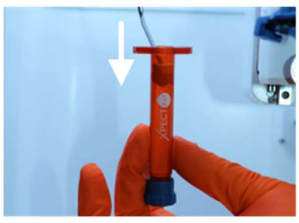
SOLID INX can be prepared according to the instructions below. The use of a temperature controlled printhead with a metal nozzle heat conductor is required.



1. Warm up the ink

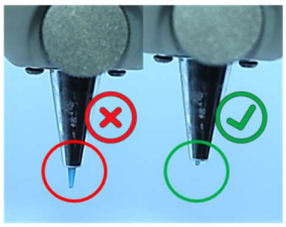
Remove the blue screw-cap, insert a nozzle tip. Place the cartridge into the printhead of the 3D Printer. Set the printhead temperature at 60 °C and heat the cartridge until the ink is molten and transparent.

If air bubbles are formed during the thawing process, keep the cartridge in the heated printhead until the air bubbles reach up to the white piston.



2. Remove the air bubbles

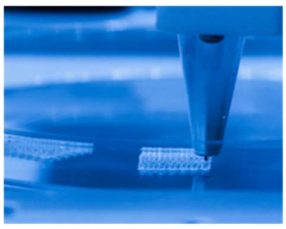
Remove the cartridge from the printing head, remove the nozzle and place back the blue screw cap of the cartridge. Gently push the white piston downwards with a spatula until the air bubbles are removed.



3. Insert the cartridge back in the printhead

Remove the screw-cap, place back the nozzle and insert the cartridge into the printhead.

The nozzle should be inserted in a metal heat conductor. Shield the nozzle from ambient temperature to the greatest extent possible.



4. Start 3D Printing

The ink is ready for printing process after calibrating the printhead.

For suggested printing parameters please refer to section "Processing Guidelines".

Processing

Recommended printing parameters for two different nozzle sizes:

Nozzle size	**22G**	**25G**
Nozzle Geometry	conical	conical
Printhead temperature	60 ± 1 °C	60 ± 1 °C
Printbed temperature	12 ± 2 °C	12 ± 2 °C
Pressure	50 ± 10 kPa	80 ± 10 kPa
Infill speed	6 ± 1 mm/s	6 ± 1 mm/s
Layer height	0.18 ± 0.01 mm	0.14 ± 0.01 mm

⚠ Use of rectilinear infill pattern is recommended.

⚠ **Photo-crosslinking:** During printing, structure should be irradiated with light (λ: 365 nm or 405 nm, Dose: 70 mJ/cm^2) after every layer. This step is required for partial crosslinking of the structure for a better shape retention. After completion of printing, the final structure should be placed under UV light for complete crosslinking. (Recommended parameters for post-printing photo-crosslinking: λ: 365 or 405 nm, Dose: 10000 mJ/cm^2)

⚠ The printing parameters have been validated for printing a cube with dimensions 15 x 15 mm (W x L) using 3 ml cartridges.