

Materials List for:

Solvent Bonding for Fabrication of PMMA and COP Microfluidic Devices

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Materials

Name	Company	Catalog Number	Comments
COP	Zeonor	604Z1020R080	20 kg COP Pellets - 1020R. Multiple suppliers can be used, but may affect bonding characteristics.
PMMA	McMaster Carr	8560K173	1.5 mm sheet thickness for our typical applications. Multiple suppliers can be used, but may affect bonding characteristics.
Cyclohexane	Sigma-Aldrich	227048	Cyclohexane, anhydrous, 99.5%. Multiple suppliers can be used. Toxic, requires fumehood.
Ethanol	Sigma-Aldrich	24102	Ethanol, absolute, ≥99.8% (GC). Multiple suppliers can be used.
Acetone	Sigma-Aldrich	179124	Acetone, ACS reagent, ≥99.5%. Multiple suppliers can be used.
2-Propanol	Sigma-Aldrich	278475	2-Propanol, anhydrous, 99.5%. Multiple suppliers can be used.
Hot plate(s)	Torrey Pines Scientific	HP60	Fully programmable digital hotplate. Multiple suppliers can be used.
Free weights	Cap Barbell	RPG#2	Standard cast iron plate. Multiple suppliers and different weights can be used.
Heated press	Carver	Auto CH	Auto series heated hydraulic press. Multiple suppliers can be used. A press that fits in a fumehood would allow the most flexibility (this model does not).
CNC Milling Machine	Tormach	PCNC 770	3 Axis CNC mill. Multiple suppliers can be used.
Endmills	Various	Various	Required sizes depend on designs. Multiple suppliers can be used.