Website #1: New Age Industries

<http://www.newageindustries.com/downloads/catalogs/NewAge_Semi-Rigid_Catalog.pdf>

Nylon or NYLOTUBE

* “Recognized as a rugged engineering material”
* Light weight
* Abrasion and cracking resistance
* Excellent resistance to tube vibration and movement

Nylon-11 vs Nylon-12

|  |  |
| --- | --- |
| Nylon-11 | Nylon-12 |
| min temp of -50 deg C | min temp of -40 deg C |
| May be limited / long lead times | no info on orders |

for Nylon-11: flexible and semi-rigid grade

variety of diameters: less than 1in

don’t know cost

comes in 250 ft?

Tubing material stuff

<http://www.globalspec.com/learnmore/flow_control_fluid_transfer/pipe_tubing_hose_fittings_accessories/plastic_tubing>

Based on this info, EVA, fluoropolymers and Nylon could work. They have a ton of different options and I don’t know which one we need.

*Looks good and I’d agree that nylon is overall better, but I’m concerned about temperature resistance. Also, figure out how to order. If you can order the 1” variety to arrive quickly, then this will work, and we’ll have to use some other criteria to decide. I looked up Nylon Tubing on McMaster as well and two results would meet the temperature requirements, but nylon in general comes in very small diameters.*

PVC

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<http://www.freelin-wade.com/nylon-p-10374-l-en.html>

Buy Nylon 11- .5 in ID

FREE samples of 1ft - up to 5

(Same website)

<http://www.freelin-wade.com/pvc-p-10606-l-en.html>

buy PVC -.5 in ID

FREE samples of 1ft -up to 5

(GOOD NYLON OPTION)

<http://www.zeusinc.com/materials/ptfe>

Polytetrafluoroethylene

min temp of -200 (MATERAL SHEET)

<http://www.grainger.com/product/PARKER-Tubing-2VLV8?functionCode=P2IDP2PCP>

PFA - Expensive($116)

Shipping - 5days

<http://www.coleparmer.com/Product/Cole_Parmer_PTFE_1_4_x_5_16_Tubing_25_Ft_Pk/EW-06605-34>

.25 in IN

PTFE --- works to -200 C

$73

<http://www.mscdirect.com/product/details/32014649?src=pla&cid=PLA-Google-PLA+-+Test&CS_003=7867724&CS_010=32014649>

PTFE .75” ID\*\*

<http://www.amazon.com/Polycarbonate-Tubing-Wall-Clear-Color/dp/B00193UNBI>

Polycarbonate

1-⅞” ID

~$20

Rigid

<http://www.usplastic.com/catalog/item.aspx?itemid=23791>

Good Polycarbonate website

Is polycarbonate too heavy?

<http://www.usplastic.com/catalog/item.aspx?itemid=35303&catid=704>

1-⅛” Polycarbonate option

<http://www.eplastics.com/Lexan_Polycarbonate_Tube>

Another Polycarbonate website with a variety of options

(GOOD POLYCARBONATE OPTION)

<http://www.mcmaster.com/#standard-plastic-and-rubber-tubing/=zgyhls>

(Recommended by joesph)

(GOOD EVA OPTION)

### Low-Temperature White EVA Tubing

1” ID

$16 for 10ft