

SINTER-1

CONSUMABLES STORAGE

Store all consumables for the Sinter-1 in a cool dry place and leave them in their original packaging.

SUPPLY GASES

- A wall-mounted rack with capacity for three or more cylinders should be installed at an appropriate height in accordance with local regulations and in specific alignment below the gas supply panel, as shown in the figure on page 26, with adjacent space allocated for the cryogenic liquid cylinder
- Store and handle unused gas cylinders and cryogenic liquid cylinders according to safe and proper handling guidelines and in compliance with proper training and local regulations
- Condensation on the cryogenic liquid cylinder can lead to wet floors under and around the cylinder, which should be treated with caution

GAS SUPPLY REQUIREMENTS

CYLINDER REQUIREMENTS

- Two 50L (300ft³) cylinders of 99.999% pure mix gas, containing no more than 10ppm impurities total: **target 2.93% hydrogen fraction in argon, and minimum 2.4% hydrogen fraction. This target is the nominal mix gas fraction used internally by Markforged.** Sinter-1 is rated for operation with nonflammable gas as defined by USA standards, up to 3.9% hydrogen in argon; **max fill pressure of 2900PSI**
- One 50L (300ft³) cylinder of UHP argon, **max fill pressure of 2900PSI**
- One medium- or high-pressure (MP or HP) cryogenic liquid cylinder (CLC) of UHP liquid argon (LAR) with integrated wheels; 230L size recommended

Note that a multipack of argon cylinders can be substituted for the inert gas CLC; a six-cylinder setup is recommended. Using a cylinder multipack with the Sinter-1 requires additional hardware. For details, see the *Gas Supply: CLC vs Multipack* article on the Markforged Support website.