



# MATHESON

ask. . The Gas Professionals™



Markforged and MATHESON developed gas specifications to ensure the smooth, accurate and efficient operation of Markforged sintering furnaces. MATHESON's national footprint can provide a reliable source of supply.

## How to Order Gases

for Markforged Metal X 3D Printer Sintering Furnace

### Gas Supply Packages for at Least 10 Sintering Furnace Runs Processing 17-4 Stainless Steel



#### Option #1 - Argon Dewar

Compact Argon gas supply for users with frequent sintering furnace runs

Qty	Part Number	Description
1	AR UHP1L	Argon UHP Cylinders, 99.999%
1	AR UHPL230-230*	Argon UHP Dewar, 99.999%
4	SX G2699809	H <sub>2</sub> bal Argon UHP Cylinders, 99.999%

\*160 and 180 liter Dewars also available.  
(Part numbers: AR UHP160-230, AR UHP180-230)



#### Option #2 - Argon Six Pack

Conserving (no vent losses) gas supply for users with infrequent sintering furnace runs

Qty	Part Number	Description
1	AR UHP1L	Argon UHP Cylinder, 99.999%
2	AR UHPB6-1L	Argon UHP 6 Pack, 99.999%
4	SX G2699809	H <sub>2</sub> bal Argon UHP Cylinders, 99.999%

#### Note:

All gases listed in Options 1 and 2 may be procured individually.

### To place an order or for prices and delivery information, contact:

MATHESON's Dedicated Contact for Markforged Customers

**833-333-4626 • [markforgedcustomer@mathesongas.com](mailto:markforgedcustomer@mathesongas.com)**

Safety Data Sheets (SDS) can be found at [www.mathesongas.com](http://www.mathesongas.com)

# MATHESON Detailed Gas Specifications

## Argon, UHP 99.999%, Cylinder

Part Number:	AR UHP1L
Cylinder:	Size 1L, 10" Dia x 55" Length, Carbon Steel
Fill Volume:	331 Cubic Feet
Fill Pressure:	2,640 PSIG @ 70 Deg F
Valve Outlet:	CGA 580
Grade:	Ultra High Purity (UHP) 99.999%
Specifications:	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> &lt; 1 ppm</li> <li>• CO &lt; 1 ppm</li> <li>• O<sub>2</sub> &lt; 3 ppm</li> <li>• THC &lt; 0.5 ppm</li> <li>• Water &lt; 5 ppm</li> </ul>

## Argon, UHP 99.999%, Dewar

Part Number:	AR UHPL230-230
Dewar:	Size 230 Liter Dewar
Fill Volume:	230 Liters
Fill Pressure:	230 PSIG
Valve Outlet:	CGA 580
Grade:	Ultra High Purity (UHP) 99.999%
Specifications:	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> &lt; 1 ppm</li> <li>• CO &lt; 1 ppm</li> <li>• O<sub>2</sub> &lt; 3 ppm</li> <li>• THC &lt; 0.5 ppm</li> <li>• Water &lt; 5 ppm</li> </ul>

## Argon, UHP 99.999%, Six Pack

Part Number:	AR UHPB6-1L
Six Pack:	6 AR UHP1L Cylinders Connected Via Manifold Installed in Cradle
Fill Volume:	331 Cubic Feet x 6 = 1,986 Cubic Feet
Fill Pressure:	2,640 PSIG @ 70 Deg F
Valve Outlet:	CGA 580 Outlet
Grade:	Ultra High Purity (UHP) 99.999
Specifications:	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> &lt; 1 ppm</li> <li>• CO &lt; 1 ppm</li> <li>• O<sub>2</sub> &lt; 3 ppm</li> <li>• THC &lt; 0.5 ppm</li> <li>• Water &lt; 5 ppm</li> </ul>

## 2.9% Hydrogen Balance Argon, UHP

Part Number:	SX G2699809
Cylinder:	Size 1L, 10" Dia x 55" Length, Carbon Steel
Fill Volume:	284 Cubic Feet (Gravimetric)
Fill Pressure:	2400 PSIG @ 70 Deg F
Valve Outlet:	CGA 350
Grade:	Ultra High Purity (UHP) 99.999% for Both Components
Blend Tolerance:	+/- 10% of H <sub>2</sub> in Argon
Specifications:	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> &lt; 1 ppm</li> <li>• CO &lt; 1 ppm</li> <li>• O<sub>2</sub> &lt; 3 ppm</li> <li>• THC &lt; 0.5 ppm</li> <li>• Water &lt; 5 ppm</li> </ul>



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