

Title: Suggested Accelerator Gas Fill Instructions

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Page 1 of 1

Rev. B

SUMMARY: This technical bulletin outlines the suggested gas filling instructions for Thermo MF Physics accelerator units. These instructions are only intended to be guidelines for field or laboratory gas introduction of pressurized Sulfur Hexafluoride into the pressured accelerator housing.

EQUIPMENT:

- Bottle of pressurized sulfur hexafluoride (SF6) gas 99.999% electronic dry grade or better.
- Gas regulator installed on SF6 bottle that can be adjusted to the correct accelerator pressure.
- Appropriate fittings with clean poly tubing that will connect to the gas regulator and Thermo MF Physics accelerator fill valve.

HAZARDS:

- Sulfur hexafluoride gas is a non-flammable, colorless, odorless gas with no warning properties. Avoid breathing vapors. Use only in a well vented area as gas is an asphyxiant.
- Contact the manufacture of the SF6 gas for MSDS data sheet for more detailed information.
- Use extreme care while using high pressure gas. Make sure gas bottle is secure from becoming dislodged at all times.

INSTRUCTIONS:

- Verify the correct pressure setting required for the accelerator. This is marked on the accelerator housing. If marking is not present or unreadable, contact Thermo MF Physics for correct pressure setting for that particular accelerator. **CAUTION! OVER-PRESSURIZATION OF THE ACCELERATOR WILL CAUSE AN EXTREME HAZARDOUS CONDITION!**
- With the regulator installed on the SF6 bottle, make sure the gas bottle is off and the regulator is set to 0 psi.
- Pinch the poly tubing within 4 to 6 inches from the accelerator fill valve fitting by folding back over the tubing.
- Open the valve on the SF6 gas bottle and adjust the pressure regulator to approximately 20 psi.
- Before connecting to the accelerator, open the tubing by releasing the pinch on the tube. Allow some gas to briefly flow through the tube. This allows the tubing to be purged with SF6.
- Once the gas has flowed briefly through the tubing, pinch off again to shut off the flow of gas and connect to the accelerator fill valve.
- When the fill tubing is securely fastened to the fill valve, release the pinch and allow the accelerator to fill to the 20 psi setting.
- Once the 20 psi pressure has been achieved, adjust the regulator for the correct fill pressure of the accelerator per the specified pressure.
- Close the fill valve to the SF6 gas bottle.
- Carefully remove the tubing from the accelerator fill valve. Be sure to hold onto the tube, once this connector is released, a brief discharge of high pressure gas will be released from the gas within the tubing.
- Install the dust cap should the accelerator have one.