Principal Investigator: _____ ***Date Approved:*** _____

This document covers basic chemical safety information for methylchlorosilane. The use of methylchlorosilane is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor. PI and/or Supervisor may use the sheet attached to this SOP to document any lab specific training for Methylchlorosilane. DO NOT USE METHYLCHLOROSILANE UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Methylchlorosilane

Methylchlorosilane (CH_5ClSi) is a colorless, highly flammable, corrosive gas that reacts violently with water to produce hydrogen chloride. The heat of this reaction can ignite the remaining gas, which when burned also produces phosgene – a poisonous gas. When inhaled or in contact with skin or mucous membranes, methylchlorosilane gas will form hydrochloric acid, destroying the tissues it touches. The gas is heavier than air and has a distinctive odor.

Methylchlorosilane is used in academic chemical and material sciences research. It is also used in the industrial production of water repellant materials.

Personal Protective Equipment & Personnel Monitoring		
 **Lab Coat**	 **Gloves**	 **Eye Protection**
Flame resistant lab coat.	Neoprene gloves are recommended. **DO NOT WEAR LATEX GLOVES**	ANSI Z87.1-compliant safety glasses or safety goggles.

Labeling & Storage

Methylchlorosilane must be stored in a toxic gas cabinet or exhausted enclosure away from combustible materials, oxidizing substances, water, or ignition sources.
OSHA regulation 1910.253(b)(4)(iii) requires that combustible cylinders in storage be separated from oxidizing gas cylinders by a minimum distance of 20 feet or by a noncombustible barrier at least five feet high and with a fire resistance rating of least one-half hour.

Ensure compressed gas cylinders are in an upright position to prevent tipping and rolling. This can be achieved by using a strap or chain 1/3 from the top of the cylinder. Alternatively, use a cylindrical casing to secure the cylinder within the exhausted enclosure next to your experimental setup. Refer to American Society of Mechanical Engineers code for Process Piping, ASME B31.3, to select compliant piping. Always use the correct pressure regulator. After

attaching the regulator, and before the cylinder is opened, check the adjusting screw of the regulator to see that it is released.

WHAT NOT TO DO: Never store cylinders on transportation carts. Never store cylinders with regulators still attached, instead remove the regulator and replace with the safety cap. Never use a cylinder without a regulator. Never permit the gas to enter the regulator suddenly. Never try to stop a leak between a cylinder and regulator by tightening the union nut unless the cylinder valve has been closed first. Never strike an electric arc on the cylinder.

Engineering Controls, Equipment & Materials

Fume Hood

If your protocol does not permit the handling of these materials in a fume hood, contact EHS to determine whether alternative engineering controls are warranted.

Ordering & Disposal

As of *July 1st 2022, Receiving & Stores will no longer coordinate the cylinder gas program for campus departments.* Beginning on July 1, departments will enter requisitions for cylinder gases into 49er Mart directly to the mandatory State Term Contract #1214A vendors, Airgas or ARC3 Gases, and deliveries/pickups will be made by the vendors directly to the department. Any order or service issues should be communicated directly to the vendor supplying the cylinder gas, or to the Purchasing Office who will assist the department with any issues encountered.

First Aid & Emergencies

Releases

Immediately notify others in the area of the release and evacuate the location where the release occurred. If venting or leaking gas catches fire, **DO NOT** attempt to extinguish flames. Notify your supervisor and call 911 from any campus phone (or 704-687-2200 from a cell phone). Report any exposure to EHS at 704-687-1111. Remain on-site (at a safe distance) to provide detailed information to first responders.

Skin Contact

Immediately remove contaminated clothing and shoes; flush skin with water in a safety shower for at least 15 minutes. Get medical attention immediately.

Eye Contact

Check for and remove contact lenses. Immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

Inhalation

Move person into fresh air. Get medical attention immediately.

Name	Signature	Date