



Safety Data Sheet

Calibration Gas Mixture: R450A

Section 1. Identification

Product identifier used on the label: Calibration Gas Mixture, R450A
 Other means of identification: Part # RBxxL-R450A/xxxx
 Product use: Calibration Standard
 Supplier's details: Calibration Technologies, Inc.
 920 N Tradewinds Parkway Columbia, MO 65201 1-866-394-5861
 Emergency telephone: 1-800-535-5053

Section 2. Hazards Identification

Classification: Compressed Gas

GHS label Elements

Signal word: Warning
 Hazard statements: Compressed gas under pressure. May explode if heated
 Hazard pictograms:



Storage: Protect from sunlight. Store in a well ventilated place
 Precautionary statement: Use valve rated for cylinder pressure.

Section 3. Composition/Information on ingredients

Substance/mixture: Mixture

Ingredient name	%	CAS number
Nitrogen	0-79.06	7727-37-9
Oxygen	0-20.89	7782-44-7
trans-1,3,3,3-Tetrafluoroprop-1-ene	0.029-58.0	29118-24-9
1,1,1,2 - Tetrafluoroethane	0.021-42.0	811-97-2

Section 4. First-aid measures

Description of necessary measures subdivided below:

Inhalation: Immediately remove victim to fresh air. Get medical attention if symptoms occur.
 Eye Contact: Rinse immediately with plenty of water for at least 15 minutes.
 Skin Contact: Thaw frosted parts with lukewarm water. Do not rub affected area.
 Ingestion: N/Ap
 Most important symptoms/effects: N/Ap
 Immediate attention/special treatment needed: N/Ap

Section 5. Fire-fighting measures

Suitable extinguishing media: N/Ap, Will not burn
 Unsuitable extinguishing media: N/Ap, Will not burn
 Specific hazards arising from the chemical: N/Ap
 Special protective equipment/precautions for fire-fighters: Contains gas under pressure. If heated, pressure will increase and cylinder may burst.

Section 6. Accidental release measures

Personal precautions, protective equipment, emergency procedures: Ventilate area, shut off valve, and remove from heat.
 Methods and materials for containment/cleaning up: N/Ap

Section 7. Handling and storage

Precautions for safe handling: Use valve rated for cylinder pressure. Avoid breathing gas. Avoid contact with eyes
 Conditions for safe storage, including any incompatibilities: Store in well ventilated area. Protect from elevated temperatures.

Section 8. Exposure controls/Personal protection

Control parameters/Occupation exposure limits:	Ingredient name	Exposure limits
	Tetrafluoroethane	AIHA WEEL TWA: 800ppm 8 hours
	Trans-1,3,3,3-Tetrafluoroprop-1-ene	AIHA WEEL TWA: 800ppm 8 hours

Eye/Face protection: Safety glasses
 Skin protection: N/Ap
 Respiratory Protection: Avoid breathing gas
 Other protective equipment: N/Ap

Section 9. Physical and chemical properties

Appearance (physical state, color, etc): Colorless
 Odor: Slightly pungent
 Odor threshold: N/Ap
 pH: N/Ap
 Melting point/freezing point: N/Ap
 Initial boiling point and boiling range: N/Ap
 Flash Point: N/Ap
 Evaporation rate: N/Ap
 Flammability (solid, gas): Not Flammable

Upper/lower flammability or explosive limits:	N/Ap
Vapor pressure:	N/Ap
Vapor density:	not determined
Relative density:	N/Ap
Solubility (ies):	N/Ap
Partition coefficient: n-octanol/water:	N/Ap
Auto-ignition temperature:	N/Ap
Decomposition temperature:	N/Ap
Viscosity:	N/Ap
Section 10. Stability and reactivity	
Reactivity:	N/Ap
Chemical stability:	Stable
Possibility of hazardous reactions:	N/Ap
Conditions to avoid:	N/Ap
Incompatible materials:	Potassium, Calcium, Powdered metals, Finely divided aluminium, Finely divided magnesium, Zinc
Hazardous decomposition products:	Hydrogen fluoride, Carbon monoxide, CO ₂ , Carbonyl halides
Section 11. Toxicological information	
Lethal concentration (LC50):	>567,000ppm (R134a ingredient), Rat 4hrs >405,000ppm (R1234yf ingredient), Rat 4 hrs
Lethal dose 50 (LD50):	N/Ap
Teratogenicity:	N/Ap
Reproductive effects:	N/Ap
Mutagenicity:	N/Ap
Section 12. Ecological information	
No adverse ecological effects are expected.	
Section 13. Disposal considerations	
Waste disposal method:	Non-refillable cylinder. Allow gas to vent slowly to atmosphere in an unconfined area until completely empty. Dispose of empty cylinder normally.
Section 14. Transport information	
UN Number:	3163
UN proper shipping name:	Compressed gases, n.o.s
Transport hazard class:	2.2 (nonflammable)
Identification number:	UN3163
Packing group:	II
Environmental hazards:	N/Ap
Transport in bulk:	N/Ap
Special precautions:	Must be shipped as Hazardous Materials.
Section 15. Regulatory information	
Safety, health and environmental regulations specific for the product in question:	N/Ap
Section 16. Other information	
Date of preparation/last revision:	10/8/2019