

Safety Data Sheet
Calibration Gas Mixture: R514A
Section 1. Identification

Product identifier used on the label:	Calibration Gas Mixture, R514A
Other means of identification:	Part # RBxxL-R514A/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
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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
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Ingredient name	%	CAS number
Nitrogen	0-79.06	7727-37-9
Oxygen	0-20.89	7782-44-7
(Z)-1,1,1,4,4,4-Hexafluoro-2-butene	0.03735-74.7	692-49-9
trans-Dichloroethylene	0.01265-25.3	156-60-5

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:	Immediately flush with copious amounts of water for at least 15 minutes.
Skin Contact:	Immediately flush skin with plenty of water.
Ingestion:	N/Ap
Most important symptoms/effects:	N/Ap
Immediate attention/special treatment needed:	N/Ap

Section 5. Fire-fighting measures

Suitable extinguishing media:	Water spray, Alcohol-resistant foam, CO ₂ , Dry chemical
Unsuitable extinguishing media:	N/Ap
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:	Use personal protective equipment.
Methods and materials for containment/cleaning up:	Ventilate area, shut off valve, and remove from heat.

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
	(Z)-1,1,1,4,4,4-Hexafluoro-2-butene	US WEEL TWA: 500ppm 8 hours
	trans-Dichloroethylene	ACGIH TWA: 200ppm 8 hours

Eye/Face protection:	Safety glasses
Skin protection:	Wear personal protective equipment
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):	N/Ap

Upper/lower flammability or explosive limits:	N/Ap
Vapor pressure:	N/Ap
Vapor density:	1.31 (77 °F / 25 °C)
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:	None known.
Conditions to avoid:	None known.
Incompatible materials:	None.

Hazardous decomposition products: No hazardous decomposition products are known.

Section 11. Toxicological information

Lethal concentration (LC50):	>690.413 mg/l ((Z)-1,1,1,4,4,4-Hexafluoro-2-butene ingredient), Rat 4hrs 95.5 mg/l (trans-Dichloroethylene 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.
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Section 14. Transport information

UN Number:	3082
UN proper shipping name:	Compressed gases, n.o.s
Transport hazard class:	9
Identification number:	UN3082
Packing group:	III
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
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Section 16. Other information

Date of preparation/last revision:	10/8/2019
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