



1.1. Product identifier

Product form : Substance
Name : Sulfur hexafluoride
CAS No : 2551-62-4
Formula : SF₆

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / mixture: Industrial use. Use as directed.

1.3. Details of the supplier of the safety data sheet

Sri Venkateswara Carbonic gases Pvt Ltd
No. Govindanaikenpalaym , Athipalayam (po) , Coimbatore – 641 110

1.4. Emergency telephone number

Emergency number: On site Emergency: +91 984222 4253

SECTION 2 : Hazard identification

2.1. Classification of the substance or mixture

GHS-US classification

Liquefied gas

2.2. Label elements

GHS-US labeling

Precautionary statements(GHS-US)

Hazard pictograms(GHS-US)



Signal word(GHS-US)

Hazard statements(GHS-US)

: WARNING

: H280-CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED



OSHA-H01-MAY DISPLACE OXYGEN AND
CAUSE RAPID SUFFOCATION

CGA-HG01-MAY CAUSE FROST BITE

:P202-Do not handle until all safety precautions
have been read and understood

P262-Do not get in eyes, on skin, or on clothing

P271+P403-Use and store only out doors or in a well-ventilated place

CGA-PG05-Use a back flow preventive device in the piping

CGA-PG06-Close valve after each use and when empty

CGA-PG02-Protect from sunlight when ambient temperature exceeds 52°C(125°F)

2.3. Other hazards

Other hazards not contributing to the

classification

: Asphyxiant in high concentrations

Contact with liquid may cause cold burns / frost bite.

2.4. Unknown acute toxicity (GHSUS)

No data available

SECTION 3 : Composition / Information on Ingredients

3.1. Substance

Name : Sulfur hexafluoride

CAS No : 2551-62-4

Name	Product identifier	%
Sulfur hexafluoride	(CAS No) 2551-62-4	99.5-100

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim from contaminated area and wear self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

First-aid measures after skin contact : In case of frostbite, pray with water for at least 15 minutes. Apply as sterile dressing. Obtain medical assistance. The liquid may cause frostbite. For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). Water temperature should be tolerable to normal skin. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. In case of massive exposure, remove clothing while showering with warm water. Seek medical evaluation and treatment as soon as possible.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eye lids open and away from the eye ball to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

First-aid measures after ingestion

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Fire fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Reactivity: No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for fire fighters

Fire fighting instructions

:Evacuate all personnel from the danger area. Use self-contained breathing apparatus(SCBA)

And protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas If safe to do so,while continuing cooling water spray.Remove ignition sources if safe to do so.Remove containers from are a offire if safe to do so.On-site fire brigades must comply with OSHA 29CFR1910.156 and applicable standards under 29CFR1910 Sub part L—FireProtection.

:Compressedgas:asphyxiant.Suffocation hazard by lack of oxygen.

Protection during firefighting

:Useself-contained breathing apparatus.Standard protective clothing and equipment (Self

Special protective equipment for fire

Contained Breathing Apparatus) for firefighters.

fighters Specific methods

:Use fire control measures appropriate for the surrounding fire.Exposure to fire and heat

Radiation may cause gas containers to rupture.Coolen dangered containers with water spray jet from a protected position.Prevent water used in emergency cases from entering sewers and drainage systems

Stop flow of product if safet

Section6 : Accidental release measures

6.1 personal precautions, protective equipment and emergency products

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2 Environmental precautions

Try to stop release. Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents / container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

6.3 Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from

Physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g. wrench, screw driver, prybar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where

Temperature will not exceed 125°F (52°C). Firmly secure container upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent turning full containers for long periods.

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be countered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal / national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

7.3. Specific end use(s)

None.

SECTION 8 : Exposure controls / personal protection

8.1. Control parameters

Sulfur hexafluoride(2551-62-4)		
ACGIH	ACGIH TLV-TWA(ppm)	1000ppm
USA OSHA	OSHA PEL(TWA)(mg/m ³)	6000mg/m ³

Sulfur hexafluoride(2551-62-4)		
USAOSHA	OSHA PEL(TWA)(ppm)	1000ppm

Sulfurhexafluoride(2551-62-4)		
ACGIH	ACGIH TLV-TWA(ppm)	1000ppm
USAOSHA	OSHA PEL(TWA)(mg/m ³)	6000mg/m ³
USAOSHA	OSHA PEL(TWA)(ppm)	1000ppm

8.2.Exposurecontrols

Appropriate engineering controls

:Oxygen detectors should be used when asphyxiating gases may be released.Consider work Permit systeme.g.for maintenance activities.Systems under pressure should be regularly checked for leakages.Provide adequate general and local exhaust ventilation.Ensure exposure is below occupational exposure limits (where available).

:Wear working gloves when handling gas containers.

Handprotection

:Wear safety glasses with side shields or goggles when trans filling or breaking transfer

Eye protection

connections.Wear safety glasses with side shields.

Respiratory protection

:When work place conditions warrant respirator use, follow a respiratory protection program that

Meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

: Wear cold insulating gloves when trans filling or breaking transfer connections.

:Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for

Thermal hazard protection

Specific methods for waste gas treatment.

Environmental exposure controls

:Wear safety shoes while handling containers.Wear leather safety gloves and safety shoes

When handling cylinders.

Other information

SECTION 9 : Physical and chemical properties

9.1.Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Colorless gas.
Molecular mass	: 146g / mol
Color	: Colorless.
Odor	: Irritating choking
Odor threshold	: No data available
pH	: Not applicable.
Relative evaporation rate(butylacetate=1)	: No data available

Relative evaporation rate(ether=1)	:Not applicable.
Melting point	:-50.8°C
Freezing point	:No data available
Boiling point	:-63.8°C
Flash point	:Not applicable.
Critical temperature	:45.5°C
Auto-ignition temperature	:No data available
Decomposition temperature	:No data available
Flammability(solid,gas)	:No data available
Vapor pressure	:23.07 bar(334.6psia)(@20°C)
Critical pressure	:37.6 bar (545.3 psia)
Relative vapor density at20°C	:No data available
Relative density	:1.4
Relative density of saturated gas/ air mixture	:5.04

Density	:0.0061g/cm³(at20°C)
Relative gas density	:5
Solubility	:Water : 41mg/l
Log Pow	:1.68
Log Kow	:Not applicable.
Viscosity,kinematic	:Not applicable.
Viscosity,dynamic	:Not applicable.
Explosive properties	:Not applicable.
Oxidizing properties	:None.
Explosion limits	:Non flammable.

9.2.Other information

Sublimation point	: -63.9°C
Gas group	: Liquefied gas
Additional information	: Gas / vapor heavier than air.May accumulate in confined spaces,particularly at or below ground level

SECTION10 : Stability and reactivity

10.1.Reactivity

No reactivity hazard other than the effects described in sub-sections below.

Stable under normal conditions.

10.3.Possibility of hazardous reactions

May occur.

10.4.Conditions to avoid

Avoid temperature above 800°C(1472°F).

10.5.In compatible materials

Explodes violently in contact with disilane.

10.6.Hazardous decomposition products

Under normal conditions of storage and use,hazardous decomposition products should not be produced.Thermal decomposition may produce:Fluorides.Sulfurdioxide.

SECTION11 : Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:Not classified
Skin corrosion / irritation	:Not classified
	pH:Not applicable.
Serious eye damage/ irritation	:Not classified
	pH:Not applicable.
Respiratory or skin sensitization	:Not classified
Germ cell mutagenicity	:Not classified
Carcinogenicity	:Not classified
Reproductive toxicity	:Not classified
Specific target organ toxicity(single exposure)	:Not classified
Specific target organ toxicity(repeated exposure)	:Not classified
Aspiration hazard	:Not classified

SECTION12 : Ecological information

12.1.Toxicity

Ecology-general:No ecological damage caused by this product.

12.2.Persistence and degradability

Sulfur hexafluoride(2551-62-4)	
Persistence and degradability	Not applicable for inorganic gases.
Sulfurhexafluoride(2551-62-4)	
Persistence and degradability	Not applicable for inorganic gases.

12.3.Bio accumulative potential

Sulfur hexafluoride(2551-62-4)	
Log Pow Log Kow	1.68
Bio accumulative potential	Not applicable
	No data available.
Sulfur hexafluoride(2551-62-4)	
Log Pow	1.68
Bio accumulative potential	No data available.

12.4.Mobility in soil

Sulfur hexafluoride(2 5 5 1 - 6 2 - 4)	
Mobility in soil Ecology-soil	No data available.
Sulfur hexafluoride(2 5 5 1 - 6 2 - 4)	Because of its high volatility,the product is unlikely to cause ground or water pollution.
Ecology-soil	
12.5.Other adverse effects	Because of its high volatility,the product is unlikely to cause ground or water pollution.

Effect on ozone layer

:None

Global warming potential [CO2=1]

:22200

Effect on the global warming

:Contains Fluorinated green house gases covered by the Kyoto protocol

SECTION13 : Disposalc onsiderations

13.1.Waste treatment methods

Waste treatment methods	:Do not discharge into any place where its accumulation could be dangerous.Avoid discharge
Waste disposal recommendations	To atmosphere.
	:Dispose of contents / container in accordance with local / regional / national / international regulations.Contact supplier for any special requirements.

SECTION14: Transport information

Inaccordance with DOT	:UN 1080 Sulfur hexafluoride,2.2
Transport document description	:UN 1080
UN-No.(DOT)	:Sulfur hexafluoride
Proper Shipping Name(DOT)	:2.2- Class 2.2-Non-flammable compressed
Class(DOT)	:2.2-Non-flammable gas
Hazardlabels(DOT)	g 49CFR173.1 a 15 s



Additional information

Emergency Response Guide (ERG) Number:126

Other information:No supplementary information availa

Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.Before transporting product containers:-Ensure there is adequate ventilation.-Ensure that containers are firmly secured.-Ensure cylinder valve is closed and not leaking.-Ensurevalveoutletcapnutorplug(whereprovided)isincorrectlyfitted.-Ensure valve protection device(where provided)is correctly fitted.

:

:1080

:SULPHUR HEXAFLUORIDE

Transport by sea

: 2 - Gases

UN-No.(IMDG)

:126

Proper Shipping Name (IMDG)

Class(IMDG)

MFAG-No

:1080

Airtransport

:Sulphur hexafluoride

UN-No.(IATA)

:2

Proper Shipping Name(IATA)

:Gases under pressure / Gases non flammable non toxic under pressure

Class(IATA)

Civil Aeronautics Law

SECTION15: Regulatory information

15.1.US Federal regulations

Sulfurhexafluoride(2551-62-4)	
Listed on the United StatesTSCA (ToxicSubstancesControlAct)inventory	
SARA Section311/312 Hazard Classes	Immediate(acute) health hazard Sudden release of pressure hazard

15.2.International regulations

India

Sulfur hexafluoride(2551-62-4)
Listed on the Canadian DSL(Domestic Substances List)

Sulfurhexafluoride(2551-62-4)

Listed on the Canadian DSL(Domestic Substances List)

EU-Regulations

Sulfur hexafluoride(2551-62-4)

Listed on the EECi nventory EINECS(European Inventory of Existing Commercial Chemical Substances)

15.2.2.National regulations

Sulfur hexafluoride(2551-62-4)

Listed on the AICS(Australian Inventory of Chemical Substances)

Listed on IECSC(Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS(Existing & New Chemical Substances) inventory

Listed on the Korean ECL(Existing Chemicals List)

Listed on NZIoC(NewZealand Inventory of Chemicals)

Listed on PICCS(PhilippinesInventory of Chemicals and Chemical Substances)

Listed on the Canadian IDL(Ingredient Disclosure List)

Listed on INSQ(Mexican National Inventory of Chemical Substances)

Listed on CICR(Turkish Inventory and Control of Chemicals)

15.3.US State regulations

Sulfur hexafluoride(2551-62-4)

U.S.- California- Proposition 65-Carcinogens List

No

Sulfur hexafluoride(2551-62-4)	
U.S.-California-Proposition65-Developmental Toxicity	No
U.S.-California-Proposition65-ReproductiveToxicity-Female	No
U.S.-California-Proposition 65-Reproductive Toxicity-Male	No
Stateorlocal regulations	U.S.-Mass achusetts-Right To Know List U.S.-New Jersey-Right to Know Hazardous SubstanceList U.S.-Pennsylvania-RTK(Right to Know)List

Sulfur hexafluoride(2551-62-4)				
U.S.-California-Proposition 65-Carcinogens List	U.S.-California-Proposition65-Developmental Toxicity	U.S.-California-Proposition65-ReproductiveToxicity-Female	U.S.-California-Proposition65-ReproductiveToxicity-Male	Non-significant risk level(NSRL)
No	No	No	No	

Sulfurhexafluoride(2551-62-4)
U.S.-Massachusetts-Right To Know List U.S.-NewJersey-Right to Know Hazardous Substance List U.S.-Pennsylvania-RTK(Right to Know)List

SECTION16: Other information

Other information:When you mix two or more chemicals,you can create additional,unexpected hazards.Obtain

And evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics,confirm their compatibility with thisproduct

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information.To promote safe use of this product,a user should(1) notify employees,agents,and contractors of the information in this SDS and of any other known product hazards and safety information,(2) furnish this information to each purchaser of the product,and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information

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NFPA health hazard

: 2- Intense or continued exposure could cause temporary

In incapacitation or possible residual injury unless prompt medical attention is given.

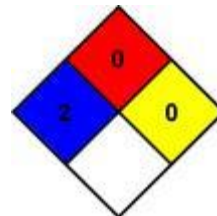
NFPA fire hazard

: 0 – Materials that will not burn.

NFPA reactivity

: 0-Normally stable,even under fire exposure conditions,

And are not reactive with water.



HMISIII Rating

Health

:1 Slight Hazard-Irritation or minor reversible injury possible

Flammability

:0 Minimal Hazard

Physical

:2 Moderate Hazard

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