

INTERNATIONAL_GASES_AND_CHEMICALS_LTD

MATERIAL SAFETY DATA SHEETS

DATE: 12/15/00

SUPPLIER ADDRESS: SPEEDWELL RD
PARKHOUSE EAST
NEWCASTLE-U-LYME

EMERGENCY PHONE: (178) 256-5556
NUMBER

1. CHEMICAL PRODUCT

PRODUCT NAME: DICHLOROSILANE

SYNONYMS: Dichlorosilicon dihydride

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)			
				ACGIH TLV	OSHA PEL	MAC	Other STEL
DICHLOROSILANE	H ₂ SiCl ₂	124109-96-0	99+%	NE	NE	NE	NE

Note: NE = NONE ESTABLISHED

3. HAZARD IDENTIFICATION

*** EMERGENCY OVERVIEW ***

Poisonous, flammable, corrosive liquid and gas under pressure.

May be fatal if inhaled.

Can cause eye, skin, and respiratory tract burns.

Can form explosive mixtures with air.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation , Eye , Skin

ACUTE EFFECTS: Corrosive to the skin and mucous membranes. Direct inhalation of this material usually causes coughing and choking. TOXIC LEVELS OF EXPOSURE TO HYDROCHLORIC ACID GENERATED BY DICHLOROSILANE IN COMBINATION WITH WATER OR AIRBORNE WATER WILL CAUSE ACID SKIN BURNS, CHEMICAL PNEUMONITIS AND POSSIBLE EYE LESIONS WITH LOSS OF VISION.

CHRONIC EFFECTS: Dermatitis, eye lesions, or pulmonary irritation may result from long term, low level exposure. Prolonged contact with eyes may result in impaired or complete loss of vision.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: None

CARCINOGENICITY (US Only):

NTP - No

IARC MONOGRAPHS - No

OSHA REGULATED - No

Continued ...

4. FIRST AID MEASURES

INHALATION: Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

EYE CONTACT: Immediately flush eyes, including under the eyelids, gently but thoroughly with plenty of running water for at least 15 minutes.

SKIN CONTACT: Immediately flush with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention.

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: Treat as for thermal burns.

5. FIRE FIGHTING MEASURES

FLASH POINT: -18 deg.C

AUTOIGNITION TEMPERATURE: 100 deg.C

FLAMMABLE LIMITS: Vol.%

LOWER: 4.1

UPPER: 98.8

EXTINGUISHING MEDIA: Carbon dioxide, water spray, or dry chemical.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray. Eliminate source of ignition and fuel. Liquid reacts violently with water.

HAZARDOUS COMBUSTION PRODUCTS: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: After fire is extinguished, be aware that there is a possibility of reignition or explosion. Cylinder rupture may occur under fire conditions. Gas sucked back into cylinder may cause explosion.

6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Remove leaking cylinder to exhaust hood or safe outdoor area. Shut off source if possible and remove source of heat.

SPECIALIZED EQUIPMENT: None

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in well ventilated areas. Store away from heat, flame, and sparks. Keep valve protection cap on cylinders when not in use.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentrations below flammable limits.

PERSONAL PROTECTION

EYE/FACE PROTECTION: Safety glasses

SKIN PROTECTION: Impervious gloves, coveralls, boots, and/or other resistant protective clothing.

RESPIRATORY PROTECTION: In case of leakage, use self-contained breathing apparatus.

OTHER PROTECTIVE EQUIPMENT: Safety shoes when handling cylinders.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless

ODOR: Acrid

PHYSICAL STATE: Gas

VAPOR PRESSURE: @20 deg.C: 1230 mm Hg

VAPOR DENSITY (AIR=1): 3.48

BOILING POINT (C): 8.0

SOLUBILITY IN WATER: Slight

SPECIFIC GRAVITY (H2O=1): Gas

Continued ...

EVAPORATION RATE: Gas
ODOR THRESHOLD: N/Av

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: Storage in poorly ventilated areas. Storage near a heat source.

MATERIALS TO AVOID: Water, oxidants, bases, organic materials.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

LETHAL CONCENTRATION (LC50): 314 ppm, rat 1 hour.

LETHAL DOSE 50 (LD50): N/Av

TERATOGENICITY: N/Av

REPRODUCTIVE EFFECTS: N/Av

MUTAGENICITY: N/Av

12. ECOLOGICAL INFORMATION

No adverse ecological effects are expected.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Allow gas to vent slowly to atmosphere in an unconfined area or exhaust hood. If the cylinders are the refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place.

14. TRANSPORT INFORMATION

CONCENTRATION: 99+%

DOT DESCRIPTION (US ONLY):

PROPER SHIPPING NAME: Dichlorosilane

HAZARD CLASS: 2.3 (poison), Hazard Zone B

IDENTIFICATION NUMBER: UN2189

REPORTABLE QUANTITIES: None

LABELING: POSION GAS, FLAMMABLE GAS

ADR/RID (EU Only): Class 2, 2tfc

SPECIAL PRECAUTIONS: Cylinders should be transported in a secure upright position in a well ventilated truck.

15. REGULATORY INFORMATION

OSHA: Process Safety Management: Materials are not listed in appendix A of 29 CFR 1910.119 as highly hazardous chemicals.

TSCA: Material is listed in TSCA inventory.

SARA: The threshold planning quantity for material is 10,000 lbs.

EU NUMBER: N/Av

NUMBER IN ANNEX 1 OF DIR 67/548: Material is listed in annex 1.

EU CLASSIFICATION: N/Av

R: N/Av

S: N/Av

16. OTHER INFORMATION

OTHER PRECAUTIONS: Protect containers from physical damage. Do not deface cylinders or labels. Cylinders should be refilled by qualified producers of compressed gas. Shipment of a compressed gas cylinder which has not been filled by the owner or with his written consent is a violation of federal law (49 CFR).

ABBREVIATIONS:

N/Av - Not Applicable

N/Av - Not Available

SA - Simple Asphyxiant

NE - None Established

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