MATERIAL SAFETY DATA SHEET

SECTION 1. NAME AND PRODUCT

NAME: T2490
SYNONYMS: (Tridecafluoro-1,1,2,2-tetrahydrooctyl)-1-dimethylchlorosilane
CAS REG.NO.: NA
FORMULA: C10H10ClF13Si

SECTION 2. HAZARDOUS INGREDIENTS

COMPONENT

ACGIH TLV OSHA PEL

(Tridecafluoro-1,1,2,2-tetrahydrooctyl)-1-dimethylchlorosilane
NA NA

For Research and Development Use Only

LEGEND:
(+): This chemical is subject to the reporting requirements of
SARA Title III Section 313 and 40CFR Part 372,
and is potentially at the maximum concentration listed.
(++) SARA Title III Section 302 Extremely Hazardous Substance
(+++) CERCLA Hazardous Substance

[000000-00-0] Chemical Abstracts Services Registry Number.

If no marks appear with a listed ingredient, then the ingredient
is not included in any of the regulatory categories appearing in
the Legend of this Material Safety Data Sheet.

SECTION 3. PHYSICAL DATA

APPEARANCE: Clear liquid
Acid-like odor.
B. PT.(deg.C/mm): 189-91/760
M. PT.(deg.C): NA
VAPOR DENSITY(AIR=1): > 1
SPECIF.C. GRAVITY: 1.473
% SOLUBLE IN WATER: Reacts
% VOLATILE BY VOLUME: NA

SECTION 4. FIRE AND EXPLOSION HAZARD

FLASH POINT: 52 C (126 F) closed cup
FLAMMABLE LIMITS (STP IN AIR)
LOWER LIMITS: NA
UPPER LIMITS: NA
FIRE EXTINGUISHING MEDIA: 'Alcohol' foam, dry chemical, CO2.
PERSONAL PROTECTION FOR FIGHTING FIRE: Fire fighters must wear positive-pressure, self-contained breathing apparatus and full protective clothing.

SECTION 5. REACTIVITY DATA

STABILITY (UNDER NORMAL CONDITIONS): Stable
CONDITIONS TO AVOID:

R
Contact with water or alcohols
Generates hydrogen chloride; TLV=C5ppm
Contact with oxidizing agents.
Contact with alkali & acid.
Exposure to heat, sparks, or other source of ignition
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID:
NA
HMIS RATINGS (Scale 0-4)
  HEALTH: 3  FLAMMABILITY: 2  REACTIVITY: 1

SECTION 6. SPILL OR LEAK PROCEDURES

IN CASE OF SPILL:
Absorb spilled material with suitable chemical binder.
Shovel absorbent into suitable waste container.
Do not contaminate soil, groundwater, or surface water.
DISPOSAL METHOD:
Follow all federal, state, and local regulations.

SECTION 7. HEALTH HAZARD DATA

TOxicity:
Material generates Hydrogen Chloride on contact with water and alcohols.

Hydrochloric Acid (aqueous):
  Toxicity Data; ihl-hmn LCLo: 1300ppm/ 30 Minutes; unk-man LDLo: 81 mg/kg;
  ihl-rat LC50: 3124ppm/ 1 Hour; ihl-mus LC50: 1108ppm/ 1 Hour; ihl-mam LCLo:
  1000mg/m3/ 2 Hours; orl-rbt LD50: 900mg/kg.

Hydrogen Chloride (gas):
  Toxicity Data; ihl-rat LC50: 5660ppm/ 30 Minutes; ihl-mus LC50: 2142ppm/ 30
  Minutes.

ROUTES AND EFFECTS OF EXPOSURE:

EYES: *Conjunctivitis, corneal damage. May cause severe chemical burns.
  SEE NOTE(S) BELOW.
SKIN: *Corrosive-causes tissue destruction. May cause severe chemical burns.
  SEE NOTE(S) BELOW.
INHALATION: *Causes irritation or damage to lung. May be harmful. Avoid contact
  .
  SEE NOTE(S) BELOW.
INGESTION: *May be harmful. Avoid contact. May cause severe chemical burns.
  SEE NOTE(S) BELOW.

NOTE:
Liquid and vapors react with moisture on the skin, eyes, and mucous membranes
to release Hydrogen Chloride which is severely irritating to these tissues.
Prolonged or repeated exposure and/or high concentrations of vapors will produce
chemical burns and destruction of affected tissues. Respirable vapors or mists
are irritating to the upper respiratory tract and bronchi. Inhalation may be
fatal as a result of spasm, inflammation, and edema of the lungs or larynx.
Prolonged or widespread contact may result in the absorption of potentially
harmful amounts of material. If ingested, this material may cause severe burns
of the mouth, pharynx, esophagus, and stomach.

* The information provided here is based on published data for structurally analogous chemicals (not on bio-assay of this specific substance)

FIRST AID PROCEDURES:

EYES: Flush with clean water for at least 15 minutes and consult physician

SKIN: Scrub with soap and water
SKIN: Remove contaminated clothing and shoes
INHALATION: Remove victim to fresh air
INHALATION: Give CPR or oxygen if necessary
INGESTION: Get medical attention

---If symptoms persist, get medical attention---

---Never give anything by mouth to an unconscious person---

CARCINOGEN STATUS: NTP?: No IARC MONOGRAPH?: No OSHA REGULATED?: No

================================================================================================
SECTION 8. SPECIAL PROTECTION INFORMATION T2490
================================================================================================

VENTILATION:
Local exhaust required
Mechanical ventilation required
RESPIRATORY PROTECTION:
In case of exposure, use appropriate NIOSH approved respiratory protection

PROTECTIVE CLOTHING:
Use impervious gloves
Use impervious clothing as necessary to protect against skin contact

EYE PROTECTION:
Use chemical goggles and face shield

================================================================================================
SECTION 9. PRECAUTIONS OR OTHER COMMENTS T2490
================================================================================================

HANDLING AND STORAGE:
Store in a cool and dry place
Protect from moisture
Protect from heat, direct sunlight, and source of ignition
Containers require grounding during use
Maintain tightly closed container
Store away from alkaline, acidic, and oxidizing materials
Provide adequate ventilation

PROPER SHIPPING NAME: Chlorosilanes, n.o.s.
TECHNICAL NAME: ((Tridecafluoro-tetrahydrooctyl)dimethylchlorosilane)
HAZARD CLASS: 8 ID NO.: UN2986 PACKING GROUP: II ERG: 29
HAZARD LABEL(S): Corrosive, flammable liquid.

Since empty containers retain product residue, follow hazard precautions even after container is emptied.

================================================================================================

NA = No applicable or relevant information available
(R) = Registered Trademark owned by or licensed to United Chemical Technologies, Inc.
(TM) = Trademark owned by or licensed to United Chemical Technologies, Inc.

This information is furnished without warranty, representation, inducement, or license of any kind, except that it is accurate to the best of United Chemical Technologies, Inc.'s knowledge or obtained from sources believed by United Chemical Technologies, Inc. to be accurate and United Chemical Technologies, Inc. does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product read its label.

Prepared by UCT Environmental & Safety Department
Revision no. 0, 04/16/93 Print date: 08/21/06