

Material Safety Data Sheet

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Code: SiSiB PC7500

Chemical Name: Vinyltri(methylethylketoxime)silane

Manufacturer / Supplier: Power Chemical Corporation.

Post Address: #117, Guanghua Road, Nanjing 210007, P.R.China

Emergency Telephone Number: +86-25-8468-0092

Alternative Names: Vinyl Oximino Silane (VOS)

Vinyl tris-(butanone oxime) Silane

2. COMPOSITION INFORMATION ON INGREDIENTS

INGREDIENTS NAME	CAS NUNBER	WEIGHT(%)
Vinyl Oximino Silane	2224-33-1	Min.95
Methyl Ethyl Ketoxime	96-29-7	Max.0.99

Trace impurities and additional material names are not listed

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Material is a clear colorless liquid with a mild ethereal odor. It is irritating to the skin, eyes and respiratory system and may cause allergic skin reaction. Determined to be of low to moderate oral toxicity.

POTENTIAL HEALTH HAZARDS:

SKIN: Causing irritation and may cause allergic skin reaction. Material may be absorbed through the skin leading to effects similar to ingestion and inhalation.

EYES: Liquid contact causes irritation and may cause burns if not promptly remove by first-aid measures.

INHALATION: Inhalation of mist of vapor may irritate respiratory system. Vapors from decomposition or exposure to atmosphere moisture may produce reversible narcotic effect. Over exposure may cause coma.

INGESTION: Low to moderate oral toxicity. Ingestion may produce blood effects, reducing the blood's ability to transport oxygen (methemoglobinemia / anemia). Reversible narcotic effects may occur.

DELAYED EFFECTS:

Male rats and rabbits exposed to methyl ethyl ketoxime throughout their lifetimes developed liver tumors. Since many commonly used chemicals cause liver tumors on rats and rabbits.

No considered variability based on laboratory tests.

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4. FIRST AID MEASURES

SKIN:

Immediately flush with large quantities of water for at least 15 minutes. Get immediate medical attention.

EYES:

Immediately flush with water, continuing for at least 15 minutes. Get immediate medical attention.

INHALATION:

Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen provided a qualified operator is available. Get immediate attention.

INGESTION:

If conscious, give two or four glasses of water or milk and induce vomiting by touching finger to back of throat. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: 143.6°F (62°C)

FLASH POINT METHOD: Closed Cup

FLAMMABILITY CLASS: Combustible liquid

EXTINGUISHING MEDIA: Use carbon dioxide, dry chemicals. Water and standard foam may be ineffective.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE, Eliminate sources of ignition. Provide proper ventilation to air. Absorb with inert material and place in an approved waste chemical container. For large spills, dike up with inert material and pump into same container. Do not allow pump to overheat. Do not allow material to enter into sewers or waterways.

7. HANDLING AND STORAGE

HANDLING:

Keep away from heat and open flame. Do not expose to water. Avoid contact with skin and eyes. Do not breathe its vapors. Transfer using a closed system or equipment able to dispose exhaust.

RECOMMENDATION:

Store in a cool, dry place far from heat, fire, strong acids and oxidizers. Protect from physical damage. Keep upright and tightly closed. Do not expose to moisture.

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8. DISCHARGE CONTRILL AND PERSONAL PROTECTION:

MECHANICAL CONTROLL: Use mechanical ventilation.

PERSONAL PROTECTION:

Skin Protection: Avoid skin contact by wearing long –sleeve shirt, gloves and trousers for routine product handling. Use impervious clothing if liquid contact is possible.

Eye Protection: Wear protective glasses. If there is possibility to contact, wear full gas mask.

Inhalation Protection: Operate a ventilating place. If possible to inhale its vapor, use gas mask with inhalation equipment. If the anti-gas substance gets ineffective, change in immediately.

DISCHARGE DATA:

Ingredient Name	ACGLH TIV	OSHA PEL	OTHER LIMIT
Methyl Ethyl Ketoxime	None	None	3ppm(TWA) 10ppm(STEL)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPREARANCE:	Clear, colorless
CHEMICAL PORMULA:	$C_{14}H_{27}N_3O_3Si$
MOLECULAR WEIGHT:	313
ODOR:	Mild ethereal odor
SPECIFIC GRAVITY: (water=1.0)	0.988g/ml
SOLUBILITY IN WATER:	React with water
BOILING POINT:	572°F (300°C)
MELTING POINT:	-74°F (-59°C)
FLASH POINT:	143.6°F (62°C)

10. STABILITY AND REACTIVITY

NORMALLY STABLE:

Stable under normal condition. Do not expose to moisture, acid, oxidizers and metals such an irons. Do not heat above 100⁰C.

INCOMTATIBILITIES:

Can react violently of in contact with electrophiles, such as FeCl₃, water and acid, and decompose hazardous products. Reaction with water will release methyl ethyl ketoxime. Thermal decomposition expected to produce Methyl Ethyl Ketoxime, SiO₂, NO₂, CO, CO₂, and possibly MEKO.

11. TOXICOLOGOCAL INFORMATION

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IMMEDIATE (ACUTE) EFFECTS:

Acute Oral (rat) LD50 = 2 - 3 ml/kg

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Component and decomposition product Methyl Ethyl Ketoxime (MEKO):

In a subchronic oral toxicity animal study, methyl ethyl ketoxime produced an adverse effect upon red blood cells (anemia). This was found for all dose levels tested. In an acute dermal animal study, 200 mg/kg caused mild hematologic (blood) effects. No effects were seen at 20 mg/kg.

Liver carcinomas were observed in a lifetime inhalation study in which mice and rats were exposed to MEKO 6 hrs/day, 5 days/week for 18 months and 26 months, respectively. These carcinomas were statistically increased in males at a MEKO concentration of 375 ppm. In addition, degenerative effects on the olfactory epithelium of the nasal passages occurred in a concentration related manner in males and females of both species at MEKO concentration of 15, 75, and 375 ppm. The effects at 15 ppm were minimal. The effect at all concentrations was limited to the olfactory tissue situated in the anterior dorsal region of the nasal cavity. Large areas of olfactory epithelium laterally and posteriorly were not affected. A subsequent subchronic inhalation study in mice found the effect after one week of exposure at 30 ppm (6 hrs/day; 5 days/week) but no increase in incidence or severity occurred with increasing exposure duration up to 13 weeks. Evidence of recovery was found after cessation of exposure. The no-effect level was 3 ppm.

MEKO is not considered mutagenic based on several in vitro and in vivo studies.

OTHER DATA:

None

12. ECOLOGICAL EFFECTS

Material will react with water, releasing MEKO which has been determined to be biodegradable and has a static

96 hour LC50 of 48 mg/L (bluegill) and a 48 hour EC50 of 750 mg/L (daphnia).

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded?

No.

If yes, the RCRA ID number is:

Not applicable.

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OTHER DISPOSAL CONSIDERATIONS:

Disposer must comply with Federal, State and Local disposal or discharge laws.

Dispose of as other combustible liquids. Incineration recommended.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT HAZARD CLASS:

Not regulated for non-bulk shipment.

Combustible Liquid, PG III (bulk shipment only)

US DOT ID NUMBER:

None required for non-bulk shipment.

NA 1993 (bulk shipment only).

15. REGULATORY INFORMATION

TSCA INVENTORY STATUS:

Listed on the TSCA Inventory

WHMIS CLASSIFICATION (CANADA):

Not determined.

INVENTORY STATUS:

This product is on the following inventories:

EINECS.

Canadian DSL.

Australian.

Korean.

Japanese (ISHL).

Philippine (PICCS).

China (Inventory of Existing Chemical Substances).

16. OTHER INFORMATION

It must be recognized that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.