

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

- 1.1 **PRODUCT NAME:** SS-4052  
**CHEMICAL NAME/FAMILY:** Vinyltris(methylethylketoxime)silane
- 1.2 **IDENTIFIED USE:** CHEMICAL FOR SYNTHESIS
- 1.3 **MANUFACTURER:** Manufactured/Supplied by Silsource Inc.  
**ADDRESS:** 240 Mary Street, Port Perry, Ontario, L9L 1B7
- 1.4 **CHEMICAL EMERGENCY ONLY (PHONE):** CANUTEC (613) 996-6666 [24 Hr.]

**SECTION 2: HAZARD IDENTIFICATION**

- 2.1 **Classification of the substance or mixture**  
**Hazard class and label elements of the product according to GHS (the sixth revised edition):**  
Acute toxicity (oral), Category 5 H303  
Acute toxicity (dermal), Category 5 H313  
Specific target organ toxicity - Repeated exposure, Category 1 H372

2.2 **Label elements**

**GHS Labelling**

Pictogram



Signal word : Danger

**Hazard statement(s)**

H303+H313 May be harmful if swallowed or in contact with skin.  
H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary statement(s)**

**Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

**Response**

P312 Call a POISON CENTER/doctor/... if you feel unwell.  
P314 Get medical advice/attention if you feel unwell.

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 2.3 **Other Hazards:** No data available

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

3.1 **Substances**

Substance name	Other Names	Product identifier number	Concentration (%)
2-Butanone,O,O',O''-(ethenylsilylidyne)trioxime(Polymer)	VINYL OXIMINOSILANE (VOS)	CAS-No. : 2224-33-1	≥ 99.0
Methyl ethyl ketoxim	MEKO	CAS-No. : 96-29-7	≤ 1.0

3.2 **Mixtures**

Not Relevant

**SECTION 4: FIRST AID MEASURES**

- 4.1 **First-aid measures after eye contact**  
Rinse eyes with water as a precaution.
- 4.2 **First-aid measures after skin contact**  
Wash skin with plenty of water.  
Take off contaminated clothing.
- 4.3 **First-aid measures after inhalation**  
Remove person to fresh air and keep comfortable for breathing.

- 4.4. First-aid measures after ingestion**  
Rinse mouth.  
Call a poison center or a doctor if you feel unwell.
- 4.5. Other medical advice or treatment**  
Treat symptomatically.

## SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media**  
**Suitable extinguishing media:** Water spray. Dry powder. Foam. Carbon dioxide  
**Unsuitable extinguishing media:** No data.
- 5.2 Special hazards arising from the substance or mixture:** Not applicable
- 5.3 Advice for firefighters**  
Protection during firefighting Do not attempt to take action without suitable protective equipment.  
Self-contained breathing apparatus. Complete protective clothing.
- 5.4 Further information**  
Not available

## SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Ventilate spillage area.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Avoid contact with skin, eyes and clothing.  
Do not attempt to take action without suitable protective equipment.  
For further information refer to section 8: "Exposure controls/personal protection".  
Dispose of materials or solid residues at an authorized site.
- 6.2 Environmental precautions**  
Avoid release to the environment.
- 6.3 Methods and materials for containment and cleaning up**  
Take up liquid spill into absorbent material.
- 6.4 Reference to other sections**  
For disposal see section 13.

## SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**  
Ensure good ventilation of the work station.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Do not get in eyes, on skin, or on clothing.  
Wear personal protective equipment.  
Wash contaminated clothing before reuse.  
Do not eat, drink or smoke when using this product.  
Always wash hands after handling the product.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store in a well-ventilated place.  
Keep cool.
- 7.3 Specific end uses**  
no data available

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Occupational Exposure Limits

VOS (2224-33-1)
No additional information available
MEKO (96-29-7)
No additional information available

### 8.2 Appropriate engineering controls

Appropriate engineering controls  
Environmental exposure controls

Ensure good ventilation of the work station.  
Avoid release to the environment.

## 8.3 Personal protective equipment

Personal protective equipment:

Safety glasses. Protective clothing. Gloves. Head/neck protection. Dust formation: dust mask.

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Colourless transparent liquid
Odour	slight.
Odour Threshold	no data available
pH	no data available
Melting point/freezing	-22°C
Initial Boiling point and Boiling Range:	>300°C
Flash point	> 99°C Atm. press.: 1013 hPa
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Upper/lower flammability or explosive limits	no data available
Vapour pressure	0.025 Pa Temp.: 25°C
Solubility	no data available
Vapour density (Air=1):	>1 (Air =1)
Relative density	0.982 g/ml, at 25°C
Partition Coefficient n-Octanol/water	no data available
Autoignition temperature	no data available
Decomposition temperature	no data available
Viscosity, kinematic	10.33 mm²/s Temp.: 'other:77.0°F' Parameter: 'cStcSt'
Viscosity, dynamic	No data available
Molecular mass	313.47 g/mol

### 9.2 Other safety information

Density	0.997 g/cm³ Type: 'density' Temp.: 20°C
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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Chemical stability and Possibility of hazardous reactions

The product is non-reactive under normal conditions of use, storage and transport.  
Stable under normal conditions.  
No dangerous reactions known under normal conditions of use.

### 10.2 Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.3 Incompatible materials

Acids.  
Oxidizing agent.  
metals.  
Incompatible with water, humid air.

### 10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on exposure routes

Oral	May be harmful if swallowed.
Skin and eyes contact	Not classified
Inhalation	Not classified

**11.2. Health hazards**

Acute toxicity (oral) May be harmful if swallowed.  
Acute toxicity (dermal) May be harmful in contact with skin.  
Acute toxicity (inhalation) Not classified

VOS (2224-33-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
LD50 dermal rat	> 2009 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
ATE KR (oral)	2500 mg/kg bodyweight
ATE KR (dermal)	2500 mg/kg bodyweight
MEKO (96-29-7)	
LD50 oral rat	930 mg/kg
LD50 dermal rabbit	185 mg/kg Source: NLM
LC50 Inhalation - Rat	20 mg/l

Skin corrosion/irritation: Not classified  
Serious eye damage/irritation: Not classified  
Respiratory sensitization: Not classified  
Skin sensitization: Not classified  
Carcinogenicity: Not classified  
Mutagenicity: Not classified  
Reproductive toxicity: Not classified  
STOT-single exposure: Not classified  
STOT-repeated exposure: Causes damage to organs through prolonged or repeated exposure.

VOS (2224-33-1)	
LOAEL (oral, rat, 90 days)	50 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	10 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
MEKO (96-29-7)	
LOAEL (oral, rat, 90 days)	40 mg/kg bodyweight Animal: rat, Guideline: other:EPA 798.6050, 798.6200, 798.6400,
NOAEC (inhalation, rat, vapour, 90 days)	0.09 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Aspiration hazard: Not classified

VOS (2224-33-1)	
Viscosity, kinematic (calculated value) (40°C)	10.33 mm <sup>2</sup> /s Temp.: 'other:77.0°F' Parameter: 'cStcSt'
Density	0.997 g/cm <sup>3</sup> Type: 'density' Temp.: 20°C
Viscosity, kinematic	10.33 cSt Temp.: 'other:77.0°F' Parameter: 'cStcSt'
MEKO (96-29-7)	
Density	0.9232 – 0.9238 g/l Type: 'density' Temp.: 20°C
Viscosity, dynamic	≈ 15 mPa·s Temp.: '20°C' Parameter: 'dynamic viscosity (in mPa s)'

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

Ecology: general

The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) Not classified

Hazardous to the aquatic environment, long-term (chronic) Not classified

VOS (2224-33-1)	
EC50 - Crustacea [1]	> 120 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	94 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	50 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	> 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 100 mg/l Test organisms (species): Oryzias latipes Duration: '14 d'

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

## 12.4. Mobility in soil

No data available

## 12.5. Other adverse effects

Ozone:

Not classified

Other adverse effects:

No additional information available

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Disposal Method

Dispose of contents/container in accordance with licensed collector's sorting instructions.

### 13.2. Disposal precaution

Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: - IMDG: - IATA: -

Not regulated for transport

### 14.2 UN proper shipping name

Not applicable

### 14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Not applicable

### 14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

Not applicable

### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

### 14.6 Special precautions for user

no data available

## SECTION 15: REGULATORY INFORMATION

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Methyltris(Methylethylketoximino)Silane	✓	✓	✓	✓	✓	✓	✓	✓	✓

EINECS European Inventory of Existing Commercial Chemical Substances.

TSCA United States Toxic Substances Control Act Inventory.

DSL Canadian Domestic Substances List.

IECSC China Inventory of Existing Chemical Substances.

NZIoC New Zealand Inventory of Chemicals.

PICCS Philippines Inventory of Chemicals and Chemical Substances.

KECI Existing and Evaluated Chemical Substances.

AICS Australia Inventory of Chemical Substances.

ENCS Existing And New Chemical Substances.

Note:

“✓” Indicates that the substance is included in the regulations

“X” Indicates no data or not included in the regulations

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

### 15.2 Chemical Safety Assessment

no data available

## SECTION 16: OTHER INFORMATION

This data is offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is made.

The recommended handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use.

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and

toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

This SDS is compliant with the GHS requirements outlined at [http://www.ccohs.ca/oshanswers/chemicals/whmis\\_ghs/sds.html](http://www.ccohs.ca/oshanswers/chemicals/whmis_ghs/sds.html)

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