

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture Tekaltus-50D

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

Identified uses Silanes, Silane coupling agents
Synthetic resin modifier

Uses advised against Industrial use only.

1.3. Details of the supplier of the safety data sheet

SUPPLIER

Company name Mingrang Tek (shanghai)Co., Ltd
CONTACT Quality Assurance Department
Address Address: R206, No.39, Qinjiang Road No.333, Xujiahui, Shanghai, China
TELEPHONE NUMBER +81 138 1854 7689

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitisation	Category 1B	H317 - May cause an allergic skin reaction.

*Hazards not stated here are "Not classified", "Not applicable" or "Classification not possible".

Hazard summary Harmful if swallowed. Cause serious eye irritation. May cause an allergic skin reaction.

2.2. Label elements

Label according to Regulation (EC) No.1272/2008 as amended

Contains: 2,2-Di(tetrahydrofuryl)propane, 2,2-Dimethyl-1-oxa-4-thia-2-silacyclohexan-6-one

Hazard pictograms**Signal word**

Warning

Hazard statements

H302 Harmful if swallowed.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.

Precautionary statements**Prevention**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage

Not available.

Disposal

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

Supplemental label

None.

information 2.3. Other hazards

Not a PBT or vPvB substance or mixture.
 This product slowly reacts with water, acids or bases to evolve following compounds:
 Carboxylic acid

SECTION 3: Composition/information on ingredients

3.2. Mixtures**General information**

Chemical name	%	CAS-No. / EC No	INDEX No.	Notes
2,2-Dimethyl-1-oxa-4-thia-2-silacyclohexan-6-one	50 - 60	18163-71-8	-	
Classification:	-			
2,2-Di(tetrahydrofuryl)propane	40 - 50	89686-69-1	-	
Classification:	Acute Tox. 4;H302, Skin Sens. 1B;H317, Eye Irrit. 2;H319			

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).
 M: M-factor
 PBT: persistent, bioaccumulative and toxic substance.
 vPvB: very persistent and very bioaccumulative substance.
 All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

4.1. Description of first aid measures**Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion

Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately.

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

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Foam. Dry chemical powder. Carbon dioxide (CO₂).
 Water spray may be used, but not as effective as other media.
Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture By heating and fire, harmful vapours/gases may be formed.
 Sulphur oxides. (corrosive)

5.3. Advice for firefighters
Special protective equipment for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.
Special fire fighting procedures Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ensure adequate ventilation. Do not touch or walk through spilled material. Wear appropriate personal protective equipment.
For emergency responders Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up Eliminate sources of ignition.
 Large Spills: Stop the flow of material, if this is without risk. Dam the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas.
 Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
 Never return spills in original containers for re-use.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Provide adequate ventilation. Do not breathe mist or vapour. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

7.2. Conditions for safe storage, including any incompatibilities Keep container tightly closed. Store in a well-ventilated place. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Keep in original container.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Occupational exposure limits No exposure limits noted for ingredient(s).
Biological limit values No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures Not available.
Derived no effect levels (DNELs) Not available.
Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Tightly sealed safety glasses according to EN 166.
Skin protection	
- Hand protection	Wear protective gloves.
- Other	Wear suitable protective clothing.
Respiratory protection	Chemical respirator with organic vapour cartridge.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practices.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Colour	Colourless. Clear.

Odour Slight odour.

Odour threshold Not available.

pH No data

Melting point/freezing point No data

Initial boiling point and boiling range 146 °C (294,8 °F) /8kPa

Flash point 118 °C (244,4 °F) Open cup
> 94 °C (> 201,2 °F) Closed cup

Evaporation rate < 1 (Butyl Acetate=1)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) No data

Flammability limit - upper (%) No data

Vapour pressure < 1,3 kPa

Vapour density (20 °C) > 1

Relative density (air=1,0)

Solubility(ies) 1,08 (25 °C)

Solubility (water)

Partition coefficient (n-octanol/water) Hydrolyzed with water gradually.
Not applicable.

Auto-ignition temperature

Decomposition temperature Not available.

Viscosity Not available.

Explosive properties Not available.

Oxidising properties Not explosive.

9.2. Other information Not oxidising.

Molecular weight
Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity Slowly reacts with water, acids or bases.

10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	None known.
10.5. Incompatible materials	Strong oxidising agents. Water, acids or alkalis.
10.6. Hazardous decomposition products	This product slowly reacts with water, acids or bases to evolve following compounds: Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Sulfur oxides.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction.

11.1. Information on toxicological effects

Acute toxicity

Components	Species	Test results
2,2-Di(tetrahydrofuryl)propane (CAS 89686-69-1)		
Acute		
Oral		
LD50	Rat	300 - 2000 mg/day
Skin corrosion/irritation	Not available.	
Serious eye damage/eye irritation	Causes serious eye irritation. [2,2-Di(2-tetrahydrofuryl)propane]	
Respiratory sensitisation	Not available.	
Skin sensitisation	May cause an allergic skin reaction. [2,2-Di(2-tetrahydrofuryl)propane]	
Germ cell mutagenicity	Not available.	
Carcinogenicity	Not available.	
Reproductive toxicity	Not available.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	
Mixture versus substance information	No information available.	
Other information	This product slowly reacts with water, acids or bases to evolve following compounds: Carboxylic acid	

SECTION 12: Ecological information

12.1. Toxicity	Based on available data, the classification criteria are not met for hazardous to the aquatic environment.
12.2. Persistence and degradability	Causes easily hydrolysis in water or atmosphere.
12.3. Bioaccumulative potential	Not available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
Biomagnification factor (BMF)	Not available.

12.4. Mobility in soil	Not available.
Mobility in general	Not available.
12.5. Results of PBT and vPvB	Not a PBT or vPvB substance or mixture
12.6. Other adverse effects	Not available

SECTION 13: Disposal considerations

13.1 Waste treatment methods	Dispose of in accordance with local regulations. Empty containers or lines may retain some product residues. This material and its container must be disposed of in a safe manner(see: Dispose instruction).
Residual waste	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Incinerate. Incinerate should be appropriately equipped for silica and other fine powder which the product will generate in incineration. Workers should wear appropriate personal protective equipments(s) such as respirator. Contract with a disposal operate licensed by the Law on Disposal and Cleaning. Dispose of contents/container in accordance with local/region/national/international regulations.

SECTION 14: Transport information

ADR	14.1 - 14.6 :: Not regulated as dangerous goods.
RID	14.1 - 14.6 :: Not regulated as dangerous goods.
ADN	14.1 - 14.6 :: Not regulated as dangerous goods.
IATA	14.1 - 14.6 :: Not regulated as dangerous goods.
IMDG	14.1 - 14.6 :: Not regulated as dangerous goods.
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	This product is not intended to be transported in bulk.

SECTION 15: Regulatory information

15.1.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU regulations	
Regulation(EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended	Not listed.
Regulation(EC) No. 850/2004 on persistent organic pollutants, Annex I as amended	Not listed.
Regulation(EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I,Part 1 as amended	Not listed
Regulation(EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I,Part 2 as amended	Not listed.
Regulation(EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I,Part 3 as amended	Not listed.
Regulation(EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended	Not listed.
Regulation(EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended	Not listed.
Regulation(EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA	Not listed.
Authorisations	
Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended	Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information**List of abbreviations**

Not available.

References

Not available.

Information on evaluation

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Method leading to the**Classification of mixture****Full text of any H-statements****Not written out in full under****Sections 2 to 15**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Training information

Follow training instructions when handling this material.

Disclaimer

This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

This product has been designed, manufactured and developed solely for general industrial use only. This product is not designed for, intended for use as, or suitable for, medical surgical or other particular purposes. Users have the sole responsibility and obligation to determine the suitability of this product for any application, to make preliminary tests, and to confirm the safety of this product for their use. Users must never use this product for the purpose of implantation into the human body and/or injection into humans.