



HITO CHEMICAL

Material Safety Data Sheet

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: TM-10
Chemical name: SILICONE RESIN
MANUFACTURED BY: JIANGXI HITO CHEMICAL CO.,LTD
**NO 6,TIANHONG ROAD,XINGHUO INDUSTRY ZONE,
JIUJIANG CITY, JIANGXI PROVINCE,CHINA**
POST CODE: 330319
Emergency telephone number: +86-792-3170318

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

Generic Description: Alkoxysilane
Physical Form: Liquid
Color: Straw
Odor: Strong odor
NFPA Profile: Health 2 Flammability 3 Instability/Reactivity 0
Note: NFPA = National Fire Protection Association

Component Name	CAS NO.	CONCENTRATION
Methylmethoxysiloxane resin	67763-03-5	90%
Methyltrimethoxysilane	1185-55-3	10%

SECTION 3 – HAZARDS IDENTIFICATION

Acute Effects

Eye: Direct contact may cause severe irritation.
Skin: May cause moderate irritation.
Inhalation: Vapor may irritate respiratory tract. Overexposure by inhalation may cause drowsiness, dizziness, confusion or loss of coordination.
Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: Overexposure may injure internally if absorbed. Repeated skin contact may cause allergic skin reaction.
Inhalation: Overexposure by inhalation may injure the following organ(s): Reproductive System. Kidneys. Bladder.
Oral: Overexposure by ingestion may injure the following organ(s): Nervous system. Brain. Thymus. Bladder. Spleen.

Other Health Effects

This product contains a chemical(s) that has the following effect(s):
Reproductive Toxicity

SECTION 4 - FIRST AID MEASURES

Eye: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 - 20 minutes while holding the eyelid(s) open. If contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately obtain medical attention.

Skin: As quickly as possible remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately flush with lukewarm gently flowing water for 15 minutes. Completely decontaminate clothing, shoes and leather goods before reuse or discard. Obtain medical attention.

Inhalation: Remove from the source of contamination or move to fresh air. If breathing is difficult, trained

personnel should administer emergency oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration or if the heart has stopped, cardiopulmonary resuscitation. Obtain medical attention.

Oral: If irritation or discomfort occur, obtain medical advice.

Notes to Physician: Treat according to person's condition and specifics of exposure.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: 50 °F / 10 °C (Seta Closed Cup)

Autoignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide

(CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large

fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire Hazards: Vapors are heavier than air and may travel to a source of ignition and flash back. Static

electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Containment/Clean up: Remove possible ignition sources. Determine whether to evacuate or isolate the area

according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbant. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

SECTION 7 - HANDLING AND STORAGE

Use with adequate ventilation. Product evolves flammable ethyl alcohol on exposure to water or humid air. Provide ventilation during use to control ethanol within exposure guidelines or use respiratory protection. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Product evolves n-butyl alcohol when exposed to water or humid air. Provide ventilation during use to control n-butyl alcohol within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally. Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Keep container closed and away from heat, sparks, and flame. Keep container closed and store away from water or moisture.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Use chemical worker's goggles.
Skin: Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.
Suitable Gloves: Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact.

Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator: General and local exhaust ventilation is recommended to maintain vapor exposures below

recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

Eyes: Use full face respirator.

Skin: Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.

Inhalation/Suitable

Respirator:

Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep

container closed. Do not take internally. Use reasonable care.

Comments: Product evolves flammable ethyl alcohol on exposure to water or humid air. Provide ventilation during use to control ethanol within exposure guidelines or use respiratory protection. Product evolves flammable methyl alcohol when exposed to water or humid air.

Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Product evolves n-butyl alcohol when exposed to water or humid air. Provide ventilation during use to control n-butyl alcohol within exposure guidelines or use respiratory protection.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid
Color: Straw
Odor: Strong odor
Specific Gravity @ 25°C: 0.96
Viscosity: 10 cSt
Freezing/Melting Point: Not determined.
Boiling Point: > 65 °C
Vapor Pressure @ 25°C: Not determined.
Vapor Density: Not determined.
Solubility in Water: Not determined.
pH: Not determined.
Volatile Content: Not determined.
Flash Point: 50 °F / 10 °C (Seta Closed Cup)
Autoignition Temperature: Not determined.
Flammability Limits in Air: Not determined.

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable.
Hazardous
Polymerization:
Hazardous polymerization will not occur.
Conditions to Avoid: None.
Materials to Avoid: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.
Hazardous Decomposition Products
Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde. Metal oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

Component Toxicology Information

statistically significant decreases in the number of pups born and the live litter size in both the first and second

generations. Prolonged estrous cycles, and decreased mating and fertility indices were observed following 700 ppm

This material contains methyltrimethoxysilane (MTMS). MTMS was evaluated in a combined repeated-dose toxicity study

with the reproduction/developmental toxicity screening test (OECD 422). Sprague-Dawley rats were gavaged daily at

dose levels of 0, 50, 250, and 1000 mg MTMS (in corn oil)/kg body weight. Test article-related effects were seen in one or

both sexes at the two top dose levels (unless otherwise noted) and included (but not limited to): increased liver weights;

increased incidence of hyperplasia and/or hypertrophy in the liver, thyroid and adrenals (high dose only); acanthocytosis

(high dose only); increased prothrombin time; elevations in blood platelet count (high dose only), serum total protein and

cholesterol. The no observed adverse effect level (NOAEL) was determined to be 50 mg/kg/day for parental toxicity and

1000 mg/kg/day for effects on reproductive performance and on developmental toxicity.

In a 90-day study, five (5) groups of 10 male and 10 female Sprague-Dawley rats were exposed to target

methyltrimethoxysilane concentrations of 0 (control), 25, 100, 400 and 1600 ppm for groups 1 through 5, respectively, for

six hours per day, five days per week. Additional satellite groups of 10 males and 10 females were included in the 0 and

1600 ppm exposure groups for evaluation of a 28-day post-exposure recovery period. Based on the grossly observed

urinary bladder calculi and kidney dilation at the 400 and 1600 ppm exposure levels, the No Observable Effect Level

(NOEL) for methyltrimethoxysilane was 100 ppm.

This material may liberate methanol upon exposure to moisture or humid air. Overexposure to methanol can result in

blindness and nervous system effects.

Special Hazard Information on Components

Reproductive Toxicity

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.
Ecotoxicity Classification Criteria
Hazard Parameters (LC50 or EC50) High Medium Low
Acute Aquatic Toxicity (mg/L) <=1 >1 and <=100 >100
Acute Terrestrial Toxicity <=100 >100 and <= 2000 >2000

SECTION 13 - DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste?
Yes

Characteristic Waste:

Ignitable: D001

State or local laws may impose additional regulatory requirements regarding disposal. Call (86) 792-3170318, if additional information is required.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Technical Name: Methyltrimethoxysilane / Methanol
Hazard Class: 3
UN/NA Number: UN 1993
Packing Group: II
Hazard Label(s): Flammable Liquid

Ocean Shipment (IMDG)

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.
Hazard Technical Name: Methyltrimethoxysilane / Methanol
Hazard Class: 3
UN/NA Number: UN 1993
Packing Group: II
Hazard Label(s): flammable liquid

Air Shipment (IATA)

Proper Shipping Name: Flammable liquid, n.o.s.
Hazard Technical Name: Methyltrimethoxysilane / Methanol
Hazard Class: 3
UN/NA Number: UN 1993
Packing Group: II
Hazard Label(s): Flammable Liquid
Call Dow Corning Transportation, (792) 792-3170318, if additional information is required.

SECTION 15 - REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.
TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA
Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):

None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):

None.

Section 311/312 Hazard Class (40 CFR 370):

Acute: Yes

Chronic: Yes

Fire: Yes

Pressure: No

Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):

None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water

and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other

reproductive harm.

None known.

Massachusetts

No ingredient regulated by MA Right-to-Know Law present.

New Jersey

Component Name	CAS Number	Wt %
Methylmethoxysiloxane resin	67763-03-5	90%
Methyltrimethoxysilane	1185-55-3	10%

SECTION 16 - ADDITIONAL INFORMATION

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either 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.

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