

MATERIAL SAFETY DATA SHEET (MSDS)

TCA-DC TITANATE

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1	Production	TCA-DC
1.2	Generic Description:	Titanium chelate
1.3	Physical form:	Liquid
1.4	Color:	Yellow to Amber
1.5	IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY	
	Manufacturer:	Nanjing Capatue Chemical Co., Ltd
	Address:	No. 20 JiangJun Avenue, Jiangning Development Zone, Nanjing, Jiangsu Province, P. R. China P.C: 211100
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	Connect with:	Anhuanbu

2. HAZARDS IDENTIFICATION

Potential Health

Effects

ANIMAL DATA: Direct contact may cause mild irritation.

Oral LD50: 23,020 mg/kg in rats

Isopropyl Alcohol Vapor and/or mist may irritate nose and throat. Overexposure by inhalation may cause drowsiness, dizziness, confusion or loss of coordination.

Inhalation 4 hour LC50: 16,000 ppm in rats

LC50:

Skin Absorption LD50: 16.37 ml/kg (c.12,900 mg/kg) in rabbits

LD50:

Oral LD50: 4700 mg/kg in rats

The product is a skin irritant, is a mild eye irritant, and is not a skin sensitizer in animals.

Toxic effects in animals from exposure to the product by inhalation, or skin contact, have not been determined.

The effects attributable to Isopropyl Alcohol may be expected.

Toxic effects observed in animals from exposure to Isopropyl Alcohol by inhalation include microscopic and porphologic changes in the epithelial cells of the nose and middle ear mucosa; and narcosis and fatty degeneration of the liver. No lung tumors were observed in a long term inhalation exposure to Isopropyl Alcohol.

Toxic effects observed in animals from exposure to Isopropyl Alcohol by ingestion include anaesthetic effects and liver effects.

Continued voluntary drinking of 2.5% aqueous Isopropyl Alcohol through two successive generations of rats produced no reproductive effects. Developmental toxicity was observed in animals exposed to Isopropyl Alcohol only at maternally toxic dose levels. Isopropyl Alcohol does not produce genetic damage in bacterial or

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mammalian cell cultures but has not been tested in animals.

Tests in bacterial or mammalian cell cultures with the product demonstrate no mutagenic activity.

HUMAN HEALTH EFFECTS OF OVEREXPOSURE:

Skin contact may cause skin irritation with discomfort or rash. There are rare inconclusive reports of human sensitization from skin contact with Isopropyl Alcohol.

Eye contact may cause eye irritation with discomfort, tearing or blurring of vision.

Inhalation of Isopropyl Alcohol may cause nonspecific discomfort such as nausea, headache or weakness; irritation of the upper respiratory passages with coughing and discomfort; or temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination or loss of consciousness.

Ingestion of Isopropyl Alcohol may cause nausea, vomiting, abdominal pain, flushing of the face, hypotension, weakness and loss of consciousness; or abnormal liver and kidney functions.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
27858-32-8	98-100	Titanium, Bis(Ethyl Acetoacetato)Diisopropoxy-
67-63-0	<2	Isopropyl Alcohol

4. FIRST AID MEASURES

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FIRST AID MEASURES

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT Flush skin with water after contact. Wash contaminated clothing before reuse.

EYE CONTACT In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

5. FIRE FIGHTING MEASURES

5.1	Flash Point	27 °C (81 °F)
5.1	Method	PMCC
5.2	Flammable liquid.	
5.3	Fire and Explosion Hazards:	Use explosion-proof exhaust systems to vent fumes resulting from hydrolysis or pyrolysis during use.
5.4	Extinguishing Media	Foam, Dry Powder (Sand or Met-L-X), Dry Chemical, CO2. Avoid using water on large spills. Water may be used to flush away residues.
5.5	Fire Fighting Instructions	Wear self-contained breathing apparatus. Wear full protective equipment. Do not use water.

6. ACCIDENTAL RELEASE MEASURES

6.1	Safeguards (Personnel)	NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.
6.2	Initial Containment	Remove source of heat, sparks, flame, impact, friction or electricity. Prevent material from entering sewers, waterways, or low areas.
6.3	Spill Clean Up	Soak up with sawdust, sand, oil dry or other absorbent material. Accidental Release Measures Place in container for disposal. Do not apply water to a large spill. Sweep up or use a non-sparking

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shovel for cleanup. This material is an ICR (ignitable, corrosive, reactive) substance under CERCLA. Unless released material is immediately cleaned up for reprocessing, recycling, or reuse, a release of 100 lbs. may trigger the reporting requirements of CERCLA Section 103.

7. HANDLING AND STORAGE

Handling (Personnel)	Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.
Handling (Physical Aspects)	Keep away from heat, sparks and flames.
Storage	Store in a well ventilated place. Keep container tightly closed. Keep in dry container. Use only dry, clean utensils when handling. Freezing will affect physical condition but will not damage. Thaw and mix before using.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed. Vent dryer or exhaust fumes outside work area.

Personal Protective Equipment

Wear safety glasses or coverall chemical splash goggles.

RESPIRATORS

Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH approved respiratory protection.

PROTECTIVE CLOTHING

Where there is potential for skin contact have available and wear as appropriate, impervious gloves, apron, pants, and jacket.

Exposure Guidelines

Applicable Exposure Limits

ISOPROPYL ALCOHOL

PEL (OSHA) 400 ppm, 980 mg/m³, 8 Hr. TWA

TLV (ACGIH) 200 ppm, 8 Hr. TWA, A4

STEL 400 ppm

AEL * (DuPont) 400 ppm, 8 & 12 Hr. TWA

*** AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.**

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry or contact the Capatue Chemical customer service group.

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14.2 Shipping Containers

55 gal steel drum with polyethylene lining

5 gal steel pail with baked-on enamel lining

Call Capatue Chemical if additional information is required.

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312 Acute: Yes

Acute : Yes

Chronic: No

Fire: Yes

Pressure: No

Reactive: No

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

12. OTHER INFORMATION

Prepared by: Nanjing Capatue Chemical Co., Ltd

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.