

MATERIAL SAFETY DATA SHEET (MSDS)

Titanate TCA-L12

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY			
1.1	Production	TCA-L12	
1.2	Generic Description:	Organo-Titanates	
1.3	Physical form:	Liquid	
1.4	Color:	Red-orange	
1.5	Odor:	Alcoholic	
1.6	HMIS Profile	Health 1	Flammability 2 Instability/Reactivity 0
1.7	NFPA Profile:	Health 1	Flammability 2 Instability/Reactivity 0
1.8	Manufacturer:	Nanjing Capatue Chemical Co., Ltd	
	Address:	No. 20 JiangJun Avenue, Jiangning Development Zone, Nanjing, Jiangsu Province, P. R. China P.C: 211100	
	Telephone:	(+86-25)-8637 1193 Fax: (+86-25) 8637 1191-0	
	24Hour Emergency Telephone:	(+86-25)-8637 1192	
	Connect with:	Anhuanbu	

2. HAZARDS IDENTIFICATION			
LD50 LC50 Mixture:	None specified by manufacturer		
Routes of Entry:	Inhalation: Yes	Skin: Yes	Ingestion: Yes
Reports of Carcinogenicity:	NTP: No	IARC: No	OSHA: No
Health Hazards Acute and Chronic:	(Acute) SKIN: Irritant. EYE: Irritant. INGEST: May be harmful if swallowed. INHAL: Respiratory tract irritant. (CHRONIC) Unknown.		
Explanation of Carcinogenicity:	Not relevant		
Effects of Overexposure:	None specified.		
Medical Condition Aggravated by Exposure:	None specified.		

3. COMPOSITION/INFORMATION ON INGREDIENTS		
<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
110438-25-0	99%	Titanium IV 2,2(bis 2-propenolatomethyl)butanolato, tris(dioctyl)phosphato-O
26952-21-6	< 0.5%	Isooctyl alcohol
67-63-0	< 0.5%	Isopropyl alcohol (SARA III)

See Section 15 for chemicals appearing on Federal or State Right-To-Know lists.

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4. FIRST AID MEASURES

- | | | |
|------------|---------------------|---|
| 4.1 | Eye contact: | Flush with water for at least 15 minutes, consult MD. |
| 4.2 | Skin: | Wash thoroughly with soap and water. Consult MD if irritation develops. |
| 4.3 | Inhalation: | Remove to uncontaminated area, consult MD. |
| 4.4 | Ingestion: | Immediately consult MD, before taking any action. |

5. FIRE FIGHTING MEASURES

- | | |
|---------------------------------------|--|
| Flash Point Method: | TCC |
| Flash Point: | >150 °F, >66 °C |
| Extinguishing Media: | Foam, dry chemical, CO2, water spray. |
| Fire Fighting Procedures: | Wear niosh / msha approved SCBA & FULL protective equipment. |
| Unusual Fire/Explosion Hazard: | May emit toxic fumes upon thermal decomposition. |

6. ACCIDENTAL RELEASE MEASURES

- | | | |
|------------|----------------------------------|---|
| 6.1 | Spill Release Procedures: | Collect and place in an appropriate disposal container. Use proper safety equipment when handling this material. Take necessary measures to minimize environmental contamination. |
| 6.2 | Neutralizing Agent: | None specified by manufacturer. |

7. HANDLING AND STORAGE

Handling and storage precautions

Store in well ventilated area. keep cover tightly closed . Do not store with incompatible materials

Other Precautions:

Do not store or consume food, drink, or tobacco in an area where they may become contaminated with this material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- | | |
|--|---|
| Respiratory protection | NIOSH/MSHA approved organic vapor respirator if use conditions exceed the pel or tlv of any components. |
| Hand protection / protective gloves | Polyolefin or suitable chemical-resistant material. |
| Eye protection | Chemical workers goggles. |
| Work Hygienic Practices: | Wash thoroughly before eating, smoking, applying cosmetics, etc. |

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	thoroughly launder work clothing before reuse.
Supplemental Safety and Health	None specified by manufacturer.
Other protective equipment	Eyebath, safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Liquid
Color:	Red- orange
Odor:	Alcohol odor
Specific Gravity @ 25°C:	1.03
Boiling Point:	B.P. Text: 160°F, 71 °C
Evaporation Rate & Reference:	<1
Vapor Density:	>1
Solubility in Water:	<1%
pH:	5.3
Percent Volatiles by Volume:	5

Note: The above information is not intended for use in preparing product specifications. Contact Capatue Chemical before writing specifications.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Hazardous	Hazardous polymerization will not occur.
Polymerization:	Will not occur
Conditions to Avoid:	Not applicable
Materials to Avoid:	Acids. Bases. Reacts with water or moisture to form: Ethanol.

Hazardous Decomposition Products

Cox and pox. phosphoric acid if decomposition occurs in the presence of water.

11. TOXICOLOGICAL INFORMATION

LD50-ORAL, rats	2000-4000 mg/Kg
LD50-SKIN, guinea pigs	1800 mg/Kg
Ames-Nonmutagenic All Strains S-9 Activated	

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12. ECOLOGICAL INFORMATION

Ecotoxicological and Chemical Fate Information:

Ecotoxicity: Material is practically non-toxic to aquatic organisms on an acute basis (LC50>100mg/l in most sensitive species). Acute LC50 for fathead minnow (pimephales promelas) is 728 mg/l. Acute LC50 for water flea (Daphnia magna) is 140 mg/l.

Biodegradation under aerobic static laboratory conditions is low (BOD20 or BOD28/ ThOD between 2.5 and 10%). Theoretical oxygen demand (ThOD) is calculated to be 2.77 p/p. 5-day biochemical oxygen demand (BOD5) IS 0.00 p/p. BOD 10 is 0.00. BOD20 is 0.14 p/p.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with all federal, state, and local regulations.

Container Disposal: Dispose of in accordance with all federal, state, and local regulations.

14. TRANSPORT INFORMATION

14.1 DOT

DOT Shipping Name	Combustible liquid, n.o.s
Hazard Class	Combustible Liquid
UN/NA No	NA 1993
Packaging Group	III
Subsidiary Label	None
DOT Placard	(BULK) COMBUSTIBLE
DOT Label(s)	None

14.2 IMO

IMO Shipping Name	Combustible liquid, n.o.s
Hazard Class	Combustible Liquid
UN No	NA 1993
Packaging Group	III
Subsidiary Label	None
IMO Label(s)	None

14.3 IATA

IATA Shipping Name	Combustible liquid, n.o.s
Hazard Class	Combustible Liquid
UN No	NA 1993
Packaging Group	III

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Subsidiary Label	None
IATA Label(s)	None
Call Capatue Chemical if additional information is required.	

15. REGULATORY INFORMATION

SARA 311/312 Chronic Health Hazard	Not determined
SARA 311/312 Acute Health Hazard	irritant
SARA 311/312 Fire Hazard	Combustible Liquid
SARA 311/312 Sudden Pressure	Not applicable
SARA 311/312 Reactivity Hazard	No
Section 302 Extremely Hazardous Ingredient	None
CERCLA Hazardous Substance	None
Section 313 Toxic Chemicals	Isopropanol 67-63-0 <5%
NJ Environmental Hazardous Substances List	Not Listed
California Proposition 65 Ingredients	None
Reported in TSCA Inventory	Yes
Reported in EEC Inventory	Yes
Reported in Canada Inventory	Yes (NDSL)
Reported in Australia Inventory	No

16. 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.