



MATERIAL SAFETY DATA SHEET
TITANIUM OXY CHLORIDE KMML GRADE

Kerala Minerals & Metals Ltd

1. PRODUCT IDENTIFICATION		
CHEMICAL NAME	: TITANIUM OXY CHLORIDE	
SYNONYMS	: Aqueous solution of titanium tetrachloride	
2.COMPOSITION/INFORMATION ON INGREDIENTS		
MATERIAL OR COMPONENT	CAS NO.	%
TiOCI2	13780-39-7	30-35%
HCl	7647-01-0	19-20%
H2O	7732-18-5	Balance
Sp. Gr.		1.35-1.45
pH		less than 1

3. HAZARD IDENTIFICATION
POTENTIAL HEALTH EFFECTS EYES: Irritation and burns SKIN: causes burns INGESTION: No ingestion hazard under doing normal industrial use. If ingested by any chance, it is irritating and corrosive.
4. FIRST AID MEASURES
INHALATION: The patient should be removed to fresh air and provide artificial respiration. EYES: Flush with copious amount of water continuously and seek medical attention. SKIN: Flush with copious amount of water and remove clothing
5. FIRE FIGHTING MEASURES
SUITABLE EXTINGUISHING MEDIA: foam, dry chemical or carbon dioxide may be used EXTINGUISHING MEDIA WHICH MUST NOT BE USED: Not applicable FIRE AND EXPLOSION HAZARD: Not flammable reacts with water releasing corrosive fumes. SPECIAL PROTECTIVE EQUIPMENT: Breathing apparatus, acid resistant gloves and boots

6. ACCIDENTAL RELEASE MEASURES
Evacuate people from nearby area. Neutralise with caustic soda or soda ash. Precaution to be taken to contain spillage before it enters drains or culvert etc.
PERSONAL PROTECTIVE EQUIPMENT: Breathing apparatus, acid resistant gloves and boots
7.HANDLING AND STORAGE
HANDLING: Use personal protection equipment like breathing apparatus, appropriate clothing and gloves and boots. Eye wash, safety showers must be readily available.
STORAGE: Should be stored in well ventilated area and cool area.
8. EXPOSURE CONTROL/PERSONAL PROTECTION
RESPIRATORY PROTECTION: Low concentration exposures (not exceeding 50 ppm HCl equivalent) cartridge or canister respirators are suitable.
HAND PROTECTION: Acid resistant gloves
EYE PROTECTION: Full-face protection against liquid splashes must be worn. Combined face and respiratory protection is recommended in practice.
Skin Protection: If contact is likely, full body protection against corrosive liquids must be used.
9. PHYSICAL AND CHEMICAL PROPERTIES
APPEARANCE: Clear yellowish liquid
ODOUR: Pungent fumes of acid
BOILING POINT: Not Determined.
EXPLOSIVE PROPERTIES: N.A.
SPECIFIC GRAVITY: 1.35-1.45
SOLUBILITY: Soluble
10. STABILITY AND REACTIVITY
STABILITY: Stable at ambient conditions.
MATERIALS TO AVOID: Avoid contact with water reacts with evolution of heat.
11. TOXICITY INFORMATION
EFFECTS OF EXPOSURE:
EYE CONTACT: Causes loss of sight
SKIN CONTACT: Will cause severe burns.
INGESTION: Causes internal injury.
12. ECOLOGICAL INFORMATION
High concentration will effect the environment, with adverse effect on living organisms.
13. DISPOSAL CONSIDERATIONS
Disposal to environment is harmful particularly if no attempt is made to neutralize the acidic hydrolysis products. Dispose as per national laws.
Containers: Should be recycled or dispose as per national laws.

14. TRANSPORT INFORMATION

LABEL: Corrosive
HAZARD CODE: 80
CLASS : 8
PACKAGING GROUP : II
UN Number: :3264
AIR (IATA) : Forbidden for transport.

15. REGULATORY INFORMATION

HAZARD CLASSIFICATION: Corrosive
RISK PHRASES: Reacts violently with water, cause burns, irritating to eyes and respiratory system.
SAFETY PHRASES: Keep container tightly closed and dry. In case of contact with water seek medical advice.