

LTS RESEARCH LABORATORIES, INC.
MATERIAL SAFETY DATA SHEET
CALCIUM VANADIUM OXIDE

GENERAL

MANUFACTURER/SUPPLIER: LTS RESEARCH LABORATORIES, INC.

COMPANY'S STREET: 37 RAMLAND ROAD
COMPANY'S CITY: ORANGEBURG
COMPANY'S STATE: NEW YORK
COMPANY'S ZIP CODE: 10962
EMERGENCY CHEMTREC #: 800-262-8200
COMPANY'S EMERGENCY TEL. #: 800-424-9300 (LOCAL)
703-527-3887 (INTERNATIONAL)
COMPANY'S TEL #: 845-494-2940
DATE MSDS PREPARED: 06/04/05
DATE MSDS REVISED: 06/07/11

1. PRODUCT IDENTIFICATION

TRADE NAME: CALCIUM VANADIUM OXIDE
CHEMICAL FORMULA: CaVO_3
CAS NUMBER: NIL
MOLECULAR WEIGHT: N.A.

2. HAZARDS IDENTIFICATION

HAZARD DESCRIPTION: C CORROSIVE
T TOXIC

RISK PHRASES: R 34 CAUSES BURNS
R 21/22 HARMFUL IN CONTACT WITH SKIN AND IF
SWALLOWED
R 23 TOXIC BY INHALATION

HAZARDOUS COMPONENTS %

OSHA/PEL: 5 mg/m^3
ACGIH/TLV: 2 mg/m^3
NIOSH REL: 2 mg/m^3
HMIS RATING:
HEALTH: 2.
FLAMMABILITY: 0
REACTIVITY: 1

3. PHYSICAL AND CHEMICAL CHARACTERISTICS

APPEARANCE: GREY, POWDER, PIECES, SPATTERING TARGETS, ODORLESS
BOILING POINT: N/A
MELTING POINT: N/A
SUBLIMATION TEMP.: NOT DETERMINED
FLASH POINT: N/A
VAPOR PRESSURE (MM HG/70 F): N/A
VAPOR DENSITY (AIR=1): N/A
DENSITY AT 20C: N/A
SOLUBILITY IN WATER: N/A
PERCENT VOLATILES BY VOLUME: N/A

AUTOIGNITION TEMPERATURE: N/A

4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A
FLASH POINT METHOD: N/A
EXPLOSIVE LIMITS:
LOWER: N/A
UPPER: N/A
EXTINGUISHING MEDIA: USE SUITABLE EXTINGUISHING AGENT FOR SURROUNDING MATERIAL AND TYPE OF FIRE. EXTINGUISHING POWDER. DO NOT USE WATER.
SPECIAL FIRE FIGHTING PROC: WEAR SELF-CONTAINED RESPIRATOR
UNUSUAL FIRE AND EXPL HAZRDS: CONTACT WITH WATER IS EXPLOSIVE.

5. STABILITY

STABILITY: STABLE
CONDITION TO BE AVOIDED: HUMIDTY
MATERIALS TO BE AVOIDED: WATER, CARBON DIOXIDE, ACIDS, ALCOHOLS, BASE SENSITIVE MATERIALS, AIR , ALKALI METALS, INTERHALOGENS
DANGEROUS REACTIONS: EXOTHERMIC REACTION WITH WATER
DANGEROUS PRODUCTS OF DECOMPOSITION: TOXIC METAL OXIDE FUME

6. HEALTH HAZARD DATA

LD50-LC50 MIXTURE: IPL-RAT TDLO=90MG/KG.
ROUTES OF ENTRY:
INHALATION: CORROSIVE, IRRITANT TO RESPIRATORY TRACT. BREATHING DUST AND FUMES CAN IRRITATE THE RESPIRATORY TRACT AND CAUSE CHEST TIGHTNESS, WHEEZING AND COUGHING.
SKIN: CORROSIVE CAUSES SKIN BURNS AND SEVERE IRRITATION. HARMFUL AMOUNTS MAY BE ABSORBED THROUGH THE SKIN. CONTACT MAY CAUSE LOCAL IRRITATION WITH REDDENING AND ITCHING.
INGESTION: IF SWALLOWED, SEEK MEDICAL ATTENTION.
HEALTH HAZARD:
ACUTE AND CHRONIC: IRRITATING AND CORROSIVE TO UPPER RESPIRATORY TRACT. CHRONIC INHALATION CAUSES INFLAMMATION OF THE RESPIRATORY PASSAGES, ULCERS OF THE MUCOUS MEMBRANES, AND POSSIBLE PERFORATION OF THE NASAL SEPTUM.

VANADIUM COMPOUNDS ACT CHIEFLY AS AN IRRITANT TO THE EYES AND RESPIRATORY TRACT. EXPOSURE MAY CAUSE CONJUNCTIVITIS, RHINITIS, AND REVERSIBLE IRRITATION OF THE RESPIRATORY TRACT. MORE SEVERE CASES MAY CAUSE BRONCHITIS, BRONCHOSPASMS, AND ASTHMA-LIKE DISEASE. MAY CAUSE POLYCYTHEMIA, RED BLOOD CELL DESTRUCTION AND ANEMIA, ALBUMINURIA AND HEMATURIA, GASTROINTESTINAL DISORDERS, NERVOUS COMPLAINTS, AND SEVERE COUGH

ADDITIONAL INFORMATION: TO OUR BEST KNOWLEDGE THE TOXICITY OF THIS SUBSTANCE IS NOT FULLY KNOWN. NO CLASSIFICATION DATA ON CARCINOGENIC PROPERTIES OF THIS MATERIAL IS AVAILABLE. VANADIUM (II) OXIDE: DANGER THROUGH SKIN ABSORPTION.

CARCINOGENICITY:
NTP: NO
IARC: NO
OSHA: NO
SYMPTOMS OF OVEREXPOSURE: IRRITATE EYES
MED COND AGGRAVATED BY EXP: RESPIRATORY CONDITIONS.
FIRST AID PROCEDURE: SEEK MEDICAL ASSISTANCE

7. ACCIDENTAL RELEASE MEASURES

IF MATERIAL IS RELEASED/ SPILLED: WEAR APPROPRIATE RESPIRATORY AND PROTECTIVE EQUIPMENT SPECIFIED IN SPECIAL PROTECTION INFORMATION. ISOLATE SPILL AREA AND PROVIDE VENTILATION. VACUUM UP SPILL USING A HIGH EFFICIENCY PARTICULATE ABSOLUTE (HEPA) AIR FILTER AND PLACE IN A CLOSED CONTAINER FOR DISPOSAL. TAKE CARE NOT TO RAISE DUST.

WASTE DISPOSAL: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
HAZARD LABEL INFORMATION: EXPLOSIVE WHEN WET, STORE IN A COOL DRY PLACE IN A TIGHTLY SEALED STORAGE CONTAINER. WASH THOROUGHLY AFTER HANDLING.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: NIOSH APPROVED DUST, MIST RESPIRATOR.
VENTILATION:
LOCAL EXHAUST: TO MAINTAIN CONCENTRATION AT OR BELOW TLV.
MECHANICAL (GENERAL): RECOMMENDED
SPECIAL: NONE
OTHER: NONE
PROTECTIVE GLOVES: NEOPRENE OR EQUIVALENT GLOVES
EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELD
OTHER PROT. CLOTHING/EQUIPM.: PROTECTIVE GEAR SUITABLE TO PREVENT CONTAMINATION.
WORK/HYGIENIC/MAINTENANCE: IMPLEMENT ENGINEERING AND WORK PRACTICE CONTROLS TO REDUCE AND MAINTAIN CONCENTRATION OF EXPOSURE AT LOW LEVELS. USE GOOD HOUSEKEEPING AND SANITATION PRACTICES. DO NOT USE TOBACCO OR FOOD IN WORK AREA. WASH THOROUGHLY BEFORE EATING AND SMOKING. DO NOT BLOW DUST OFF CLOTHING OR SKIN WITH COMPRESSED AIR.

10. TRANSPORTATION DATA

DOT REGULATED FOR POWDER

UN NUMBER:	1910
HAZARD CLASS:	8
ADR/RID CLASS:	8 (CR) CORROSIVE SUBSTANCES
IMDG CLASS:	8
ICAO/IATA CLASS:	8
PACKING GROUP:	III
PROPER SHIPPING NAME:	CALCIUM OXIDE

10. OTHER INFORMATION

THIS SAFETY DATA SHEET SHOULD BE USED IN CONJUNCTION WITH TECHNICAL SHEETS. IT DOES NOT REPLACE THEM. THE INFORMATION GIVEN IS BASED ON OUR KNOWLEDGE OF THIS PRODUCT, AT THE TIME OF PUBLICATION. IT IS GIVEN IN GOOD FAITH. THE ATTENTION OF THE USER IS DRAWN TO THE POSSIBLE RISKS INCURRED BY USING THE PRODUCT FOR ANY OTHER PURPOSE OTHER THAN THAT FOR WHICH IT WAS INTENDED. THIS DOES NOT IN ANY WAY EXCUSE THE USER FROM KNOWING AND APPLYING ALL THE REGULATIONS GOVERNING HIS ACTIVITY. IT IS THE SOLE RESPONSIBILITY OF THE USER TO TAKE ALL PRECAUTIONS REQUIRED IN HANDLING THE PRODUCT. THE AIM OF THE MANDATORY REGULATIONS MENTIONED IS TO HELP THE USER TO FULFILL HIS OBLIGATIONS REGARDING THE USE OF HAZARDOUS PRODUCTS.

