



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Vanadium (V) triisopropoxide oxide  
PRODUCT NUMBER: 3777  
CAS NUMBER: 5588-84-1  
SYNONYMS: Vanadyl (V) Isopropoxide, Vanadyl Isopropylate, Tri-iso-propylvanadate, Isopropylorthovanadate, VTIP

### MANUFACTURER:

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Warning**

### Hazard Statements

H226	Flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P403+P233	Store in a well-ventilated place.

### HMIS CLASSIFICATION:

Health: 2 Fire: 2 Reactivity Hazard: 0

### NFPA RATING:

Health: 2 Flammability: 2 Reactivity Hazard: 0

**EYE CONTACT:** Causes mild to severe irritation of the eyes.

**SKIN CONTACT:** Causes irritation of the skin. Prolonged may result in redness or dermatitis.

**INHALATION:** Irritation to the nose, mucous membranes, and respiratory tract. Can cause dizziness, headaches, nausea, or impaired co-ordination.

**INGESTION:** Irritation to the mouth, throat, or stomach. Ingestion may cause gastrointestinal distress, nausea, vomiting, and headache.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula:  $\text{VO}(\text{OC}_3\text{H}_7)_3$

Molecular Weight: 224.20

CHEMICAL NAME	CAS#	%
Vanadium (V) triisopropoxide oxide	5588-84-1	100

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate medical attention.

**SKIN EXPOSURE:** Wash affected area with soap and copious amounts of water. Rinse thoroughly. Remove contaminated clothes if necessary. Seek medical assistance if redness and irritation persists.

**INHALATION:** Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.

**INGESTION:** Do not induce vomiting. Seek medical attention immediately.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** 45° C- closed cup

**AUTO IGNITION TEMPERATURE:** Not available

**EXPLOSION LIMITS:** Not available

**EXTINGUISHING MEDIUM:** Carbon dioxide, foam, or extinguishing powder.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Carbon oxides and vanadium oxides.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear all appropriate equipment when using this material. Ensure adequate ventilation. Keep unprotected persons away. Keep away from ignition sources.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains or allowing to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Absorb material in inert material and place in a well-marked container for proper disposal.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear appropriate personal protective equipment. Use with adequate ventilation. Keep away from sources of ignition. Keep unprotected persons away.

**CONDITIONS FOR SAFE STORAGE:** Store in cool, dry, and well-ventilated area. Store away from oxidizing agents, water, moisture. Protect from humidity and water. Store under dry inert gas.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### EXPOSURE CONTROLS

Component	Exposure Limits	Basis	Entity
Vanadium (V) triisopropoxide oxide	0.05 mg/m <sup>3</sup>	REL	NIOSH

REL: Recommended Exposure Limit

**EYE PROTECTION:** Wear chemical safety glasses or goggles.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, apron, or lab coat.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Colorless, yellow-green to gold, or orange liquid

**ODOR:** Alcohol like

**MOLECULAR WEIGHT:** 244.20

**BOILING POINT:** 80-82°C

**MELTING POINT:** No data available

**SPECIFIC GRAVITY:** 1.035

**SOLUBILITY IN WATER:** Decomposes

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Sparks, flame, heat, electrostatic charges, sources of ignition, and moisture

**INCOMPATIBILITY:** Moisture, water, and strong oxidizing agents

**DECOMPOSITION PRODUCTS:** Carbon oxides and vanadium oxides.

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** Not available

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

**MUTAGENIC EFFECTS:** Not available

**TETRATOGENIC EFFECTS:** Not available

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

No data available.

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

## SECTION 14 TRANSPORTATION DATA

DOT: UN1993	IATA: UN1993
Flammable liquids, n.o.s. (Vanadium (V) trisopropoxide oxide)	Flammable liquid, n.o.s. (Vanadium (V) trisopropoxide oxide)
CLASS 3	CLASS 3
PG III	PG III

Marine Pollutant: No

## SECTION 15 REGULATORY INFORMATION

**TSCA:** Listed in the TSCA inventory

**SARA 302/304:** Not Listed

**SARA 311/312:** Fire hazard, acute health hazard.

**SARA (TITLE 313):** Vanadium (V) trisopropoxide oxide

**CALIFORNIA PROP. 65:** Not Listed

**WHMIS CANADA:** Class B-3: Combustible Liquid. Class D-2B: Toxic material causing other toxic effects.

## SECTION 16 OTHER INFORMATION

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

**DATE REVISED:** 03/26

**SDS DEPT.**