



MATERIAL SAFETY DATA SHEET

Product: 70-7818

Vitamin D Internal Standard Stock

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The following information is believed to be accurate and is currently the best information available to us. However, we make no warranties, express or implied, with respect to the information supplied and we assume no liability resulting from its use.

2. HAZARDOUS IDENTIFICATION

HAZARD CLASS	Irritant		NFPA	HMIS
Eyes:	Irritant	HEALTH	2	2
Skin:	Irritant	FLAMMABILITY	3	3
Ingestion:	Irritant	REACTIVITY	0	0
Inhalation:	Irritant	NFPA SPECIAL HMIS PPE	-	-

3. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	Acetonitrile	Ethanol	Methanol	Isopropanol
PERCENT (wt. %)	30 - 60	10 - 30	1 - 5	1 - 5
CAS NO.	CAS # 78-05-8	CAS # 64-17-5	67-56-1	CAS # 67-63-0
EINECS NO.	608-001-00-3	200-578-6	200-659-6	No information available
RISKS	R11, R20/21/22, R36	R11, R61	R11, R23/24/25, R39	R11, R36, R67
SAFETY	S16, S36/37	S7, S16	S7, S16, S36/37, S45	S7, S16, S24, S25, S26



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4. FIRST AID MEASURES

- GENERAL:** Remove contaminated clothing, wash thoroughly before reuse.
- EYES:** Flush with water for at least 15 minutes occasionally raising upper and lower eyelids.
- SKIN:** Remove contaminated clothing and flush with water thoroughly
- INHALATION:** Vapors may be irritating to respiratory system.
- INGESTION:** If large amounts are swallowed, do not induce vomiting, get medical help immediately.

5. FIRE FIGHTING MEASURES

- UNUSUAL FIRE AND EXPLOSION:** Highly flammable in presence of open flames, sparks and static discharge, of shocks, of heat, of oxidizing materials.
- HAZARDS:** Emits oxides of carbon and nitrogen and hydrogen cyanide when ignited.
- EXTINGUISHING MEDIA:** Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build up, auto-ignition or explosion.
- SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus, and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area.
Wear appropriate personal protective clothing and equipment. Avoid breathing vapors.
Contain spill. Scoop up using non-sparking tools and store in a suitable waste container.
Wash contaminated areas with soap and water.

7. HANDLING AND STORAGE

Keep away from heat, sparks and flame. Keep container closed. Keep container in a cool, well-ventilated area. Do not get in eyes, on skin, or on clothing. Do not ingest. Do not breathe gas/fumes/vapor/spray. Keep container tightly closed
Use good laboratory practice when working with any chemical whether it is considered hazardous or not.



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8. EXPOSURE CONTROL/PERSONAL PROTECTION

ROUTES OF ENTRY

INHALATION: Yes

SKIN: Yes

INGESTION: Yes

HEALTH HAZARDS

ACUTE: Vapors may be irritating to skin, eyes, nose and throat.

CHRONIC: Chronic irritation of exposed tissues.

VENTILATION

LOCAL EXHAUST: Good laboratory ventilation is acceptable.

MECHANICAL (GENERAL): Use in hoods if possible

SPECIAL: None

OTHER: None

PROTECTIVE CLOTHING OR EQUIPMENT

GLOVES: Disposable laboratory gloves are adequate

EYE PROTECTION: Glasses or goggles.

RESPIRATORY: Use an approved full face respirators with multi-purpose cartridges

OTHER: Lab coats

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear Liquid

ODOR: Aromatic

pH: Information not available

MOLECULAR WEIGHT: Information not available

MELTING POINT: Information not available

BOILING POINT: Information not available

AUTOIGNITION TEMPERATURE: Information not available

FLASH POINT: 26°C

LOWER EXPLOSION LIMIT: Information not available

UPPER EXPLOSION LIMIT: Information not available

SPECIFIC GRAVITY: Information not available



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10. STABILITY & REACTIVITY

STABILITY/CONDITIONS TO AVOID: This is a stable chemical. Avoid heat, temperature extremes, and direct sunlight.

INCOMPATIBILITY (MATERIALS TO AVOID): Acids, bases, oxidizing agents, reducing agents, alkali metals.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Oxides of carbon and nitrogen, formaldehyde and hydrogen cyanide

HAZARDOUS POLYMERIZATION: Not Applicable

11. TOXICOLOGY INFORMATION

PRODUCT TOXICOLOGY INFORMATION:

SYMPTOMS AND SIGNS OF EXPOSURE: May cause nose and throat irritation, asphyxiation, nausea, chest pain, convulsions and liver, kidney damage.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Cardiovascular. Central nervous system. Gastrointestinal tract. Preexisting eye disorders. Kidney disorders. Liver disorders. Skin disorders.

EMERGENCY AND FIRST AID PROCEDURES: In case of contact, wash skin with copious amounts of water.
Flush eyes with copious amounts of water for at least 15 minutes.
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Submit to medical examination.

CARCINOGENICITY: Not Applicable

RTECS #: AL7700000(Acetonitrile), KQ6300000 (ethanol), PC1400000 (methanol), NT8050000 (isopropanol)

ACGIH TLV TWA: See below

OSHA PEL: 70 mg/m³ TWA (Acetonitrile)

NTP: No data found

IARC Monographs: No data found

HAZARDOUS COMPONENT TOXICOLOGY INFORMATION:

Hazardous Components:	Acetonitrile	Ethanol	Methanol	Isopropanol
RTECS #	AL7700000	KQ6300000	PC1400000	NT8050000
OSHA PEL	70 mg/m ³ TWA	1900 mg/m ³ TWA	260 mg/m ³ TWA (skin)	980 mg/m ³ TWA
ACGIH TLV	33.6 mg/m ³ TWA (skin)	1900 mg/m ³ TWA	260 mg/m ³ TWA	490 mg/m ³ TWA

TOXICITY DATA

Acute Toxicity

Product Information Harmful by inhalation, in contact with skin and if swallowed.

Irritation Irritating to eye. Vapors may cause drowsiness and dizziness.



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Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl Alcohol	1501 mg/kg (Rat)		124.7 mg/L (Rat) 4h
Methyl Alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4h
Isopropyl Alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h
Acetonitrile	1327 mg/kg (Rat)	395 mg/kg (Rabbit)	16000 ppm (Rat) 4h

Chronic Toxicity

Avoid repeated exposure. Repeated or prolonged overexposure to solvents may cause permanent damage to the nervous system. Inhalation, ingestion, or skin absorption of methanol can cause blindness.

Target Organ Effects

Blood, Central nervous system (CNS), Central Vascular System (CVS), Eyes, Gastrointestinal tract (GI), Kidney, Liver, Reproductive system, Respiratory system, Skin.

Other Adverse Effects

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Ethyl Alcohol	LC50 = 12900 mg/L Oncorhynchus mykiss 96 h LC50 = 14.2 mg/L Pimephales promelas 96 h	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	EC50 = 10800 mg/L 24 h EC50 = 9268 mg/L 48 h
Methyl Alcohol	LC50 = 13200 mg/L Oncorhynchus mykiss 96 h LC50 = 28100 mg/L Pimephales promelas 96 h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	
Isopropyl Alcohol	LC50 = 61200 mg/L Pimephales promelas 96 h LC50 = 94900 mg/L Pimephales promelas 96 h LC50 = 9640 mg/L Pimephales promelas 96 h	EC50 = 35390 mg/L 5 min	EC50 = 13299 mg/L 48 h
Acetonitrile	LC50 = 1000 mg/L Pimephales promelas 96 h LC50 = 1640 mg/L Pimephales promelas 96 h LC50 = 1650 mg/L Poecilia reticulata 96 h LC50 = 1850 mg/L Lepomis macrochirus 96 h	EC50 = 28000 mg/L 48 h EC50 = 73 mg/L 24 h EC50 = 7500 mg/L 15 h	EC50 = 5838 mg/L 18 h

13. DISPOSAL CONSIDERATIONS

Contact local hazardous materials or chemical waste disposal agency for regulations.

14. TRANSPORT INFORMATION

IATA CLASSIFICATION:

UN ID NUMBER: UN 1993
PROPER SHIPPING NAME: Flammable liquid, n.o.s. (acetonitrile, ethanol, methanol, propanol mixture)
CLASS OR DIVISION: 3
SUB RISK:
HAZARD LABEL(S): Flammable liquid
PACKAGING GROUP: PG II
LIMITED QUANTITY PKG INSTRUCTION: Y305



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MAXIMUM LIMITED QUANTITY: 1 L
SPECIAL PROVISIONS: None
ERG CODE: 3L

15. REGULATORY INFORMATION

PRODUCT RISK STATEMENTS: R11, R20/21/22, R36, R23/24/25, R39, R61
PRODUCT SAFETY STATEMENTS: S7, S16, S36/37, S24/25/26, S45

16. OTHER INFORMATION