Fisher Scientific

Part of Thermo Fisher Scientific

Material Safety Data Sheet

Creation Date 08-Nov-2010 **Revision Date** 03-Dec-2012 **Revision Number** 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Ammonium Vanadate (Laboratory)**

Cat No. : **A714-500**

Synonyms Ammonium metavanadate; Ammonium meta-vanadate (Laboratory)

Recommended Use Laboratory chemicals

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. HAZARDS IDENTIFICATION

DANGER

Emergency Overview

May be fatal if inhaled. Toxic if swallowed. Irritating to eyes, respiratory system and skin. Harmful if swallowed. Very toxic in contact with skin.

Appearance Light green **Physical State** Solid **Odor** Odorless

Target Organs Respiratory system, Eyes, Skin, Liver, Kidney

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes	Irritating to eyes. Moderately irritating to the eyes.
Skin	Irritating to skin. May be harmful in contact with skin.
Inhalation	May be fatal if inhaled. Irritating to respiratory system. May cause irritation of respiratory tract.
Ingestion	Toxic if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may cause irritation to mucous membranes.

Chronic Effects

May cause adverse liver effects: May cause adverse kidney effects: Experiments have shown reproductive toxicity effects on laboratory animals: Teratogenic effects have occurred in experimental animals: Developmental effects have occurred in experimental animals: Avoid repeated exposure

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Preexisting eye disorders. Kidney disorders. Liver disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Ammonium vanadate	7803-55-6	>95

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flash Point No information available
Method - No information available

Autoignition Temperature Not applicable
Explosion Limits
Upper No data available
Lower No data available

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available

Hazardous Combustion Products No information available.

Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA **Health** 3 **Flammability** 1 **Instability** 1 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. HANDLING AND STORAGE

Handling Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe vapors/dust. Do not ingest.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium vanadate			Ceiling: 0.05 mg/m³

Legend

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Light green
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Vapor Pressure	No information available
Vapor Density	Not applicable
Viscosity	Not applicable
Boiling Point/Range	No information available
Melting Point/Range	200 °C / 392 °F
Decomposition temperature	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Specific Gravity	No information available
Solubility	No information available
log Pow	No data available

Molecular Weight	116.98
Molecular Formula	H4 N O3 V

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions. Moisture sensitive.
Conditions to Avoid	Avoid dust formation. Incompatible products. Excess heat. Exposure to moisture.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Ammonia, Nitrogen oxides (NOx), Heavy metal oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium vanadate	Not listed	Not listed	7800 µg/m³ (Rat) 4 h 2.5 mg/L (Rat) 4h

Irritation	Irritating to eyes
Toxicologically Synergistic Products	No information available

Chronic Toxicity

Carcinogenicity	There are no known carcinogenic chemicals in this product.
Sensitization	No information available
Mutagenic Effects	No information available
Reproductive Effects	Experiments have shown reproductive toxicity effects on laboratory animals.
Developmental Effects	Developmental effects have occurred in experimental animals.
Teratogenicity	Teratogenic effects have occurred in experimental animals.
Other Adverse Effects	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.
Endocrine Disruptor Information	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ammonium vanadate	Not listed	Ictalrus catus: LC50=2.6 mg/L 96h	Not listed	Not listed

Persistence and Degradability . The product includes heavy metals. Prevent release into the environment. Special pretreatment required.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

UN-No	UN2859
Proper Shipping Name	AMMONIUM METAVANADATE
Hazard Class	6.1
Packing Group	II

TDG

UN-No	UN2859
Proper Shipping Name	AMMONIUM METAVANADATE
Hazard Class	6.1
Packing Group	II

IATA

UN-No	UN2859
Proper Shipping Name	AMMONIUM METAVANADATE
Hazard Class	6.1
Packing Group	II

IMDG/IMO

UN-No	UN2859
Proper Shipping Name	AMMONIUM METAVANADATE
Hazard Class	6.1
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Ammonium vanadate	X	X	-	232-261-3	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Ammonium vanadate	7803-55-6	>95	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
Not applicable

Clean Air Act
Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Ammonium vanadate	1000 lb	-

California Proposition 65
This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ammonium vanadate	X	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
D1A Very toxic materials
D2A Very toxic materials
D2B Toxic materials

16. OTHER INFORMATION

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(M)SDS sections updated 2 3

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS