

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 1 of 12

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Ammonium monovanadate for analysis, ACS

REACH Registration Number: 01-2119983501-37-XXXX
CAS No: 7803-55-6
EC No: 232-261-3

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: Fa. Bernd Kraft GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
e-mail: info@berndkraft.de
Contact person: Abteilung Produktsicherheit
e-mail: produktsicherheit@berndkraft.de
Internet: www.berndkraft.de
Responsible Department: Abteilung Produktsicherheit
Telefax: 0203/5194-290
Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Repr. 2; H361d
Acute Tox. 3; H301
Acute Tox. 4; H332
Eye Irrit. 2; H319
STOT RE 1; H372
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling
ammonium trioxovanadate

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 2 of 12

Signal word: Danger

Pictograms:



Hazard statements

- H301 Toxic if swallowed.
- H332 Harmful if inhaled.
- H319 Causes serious eye irritation.
- H361d Suspected of damaging the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P201 Obtain special instructions before use.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
7803-55-6	ammonium trioxovanadate	100 %
	232-261-3	
	Repr. 2, Acute Tox. 3, Acute Tox. 4, Eye Irrit. 2, STOT RE 1, Aquatic Chronic 2; H361d H301 H332 H319 H372 H411	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7803-55-6	232-261-3	ammonium trioxovanadate	100 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = 2,61 mg/l (dusts or mists); dermal: LD50 = > 2500 mg/kg; oral: LD50 = 218,1 mg/kg	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 3 of 12

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water. (Water, to which activated charcoal may be added)

Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Irritant

Cough

Dyspnoea

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-flammable.

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 4 of 12

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Bei offenem Umgang sind Vorrichtungen mit lokaler Absaugung zu verwenden. Staubbildung vermeiden. Staub nicht einatmen.

Vor Gebrauch Kennzeichnungsetikett lesen.

Use extractor hood (laboratory).

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse.

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Store in a place accessible by authorized persons only.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

Further information on storage conditions

Store in a dry place. hygroscopic.

Store in a well-ventilated place. Keep container tightly closed.

7.3. Specific end use(s)

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 5 of 12

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
7803-55-6	ammonium trioxovanadate		
Worker DNEL, long-term	inhalation	systemic	0,64 mg/m ³
Worker DNEL, long-term	inhalation	local	0,18 mg/m ³
Worker DNEL, acute	inhalation	local	0,92 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	0,18 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,11 mg/m ³
Consumer DNEL, acute	inhalation	local	0,57 mg/m ³
Consumer DNEL, long-term	oral	systemic	0,18 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	0,92 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment	Value	
7803-55-6	ammonium trioxovanadate	
Freshwater	0,0076 mg/l	
Freshwater (intermittent releases)	0,00693 mg/l	
Marine water	0,0025 mg/l	
Freshwater sediment	240 mg/kg	
Marine sediment	79 mg/kg	
Secondary poisoning	0,167 mg/kg	
Micro-organisms in sewage treatment plants (STP)	0,45 mg/l	
Soil	7,2 mg/kg	

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 6 of 12

By long-term hand contact
Trade name/designation KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11mm
Wearing time with permanent contact: >480min

By short-term hand contact
Trade name/designation KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11mm
Wearing time with occasional contact (splashes): >480min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Filtering device with filter or ventilator filtering device of type: P3

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	
Odour:	odourless
Changes in the physical state	
Melting point/freezing point:	200 °C
Boiling point or initial boiling point and boiling range:	?
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
:	No data available
Flash point:	?
Flammability	
Solid/liquid:	not determined
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	No data available
Self-ignition temperature	
Solid:	not determined

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 7 of 12

Gas:	not applicable
Decomposition temperature:	>150 °C
pH-Value (at 20 °C):	7,1 (5,1 g/l)
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Water solubility: (at 20 °C)	5,1 g/L
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure: (at 50 °C)	<=1100 hPa
Vapour pressure:	No data available
Density:	2,32600 g/cm ³
Bulk density:	1000 kg/m ³
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion:	No data available
Oxidizing properties	
Not oxidising.	

Other safety characteristics

Solvent separation test:	No data available
Solid content:	not determined
Evaporation rate:	not determined

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

hygroscopic.

10.3. Possibility of hazardous reactions

Oxidising agent
Acid
alkali

10.4. Conditions to avoid

Heat
Humidity

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 8 of 12

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Toxic if swallowed.

Harmful if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7803-55-6	ammonium trioxovanadate				
	oral	LD50 218,1 mg/kg	Rat	Study report (1992)	OECD Guideline 401
	dermal	LD50 > 2500 mg/kg	Rat	Study report (1992)	OECD Guideline 402
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) dust/mist	LC50 2,61 mg/l	Rat	Study report (1992)	OECD Guideline 403

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging fertility or the unborn child. (ammonium trioxovanadate)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (ammonium trioxovanadate)

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 9 of 12

Other information

No data available

Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7803-55-6	ammonium trioxovanadate					
	Acute fish toxicity	LC50 mg/l	3,17	96 h	Gasterosteus aculeatus	Environmental Toxicology 20:18–22. (2005) EPA OPPTS 850.1075
	Acute algae toxicity	ErC50 mg/l	2,907	72 h	Desmodesmus subspicatus	Study report (1999) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	1,52	48 h	Daphnia magna	Study report (1978) 48h mortality test with daphnids
	Fish toxicity	NOEC mg/l	>= 0,48	28 d	Jordanella floridae	Water Research 13:905-910. (1979) Different groups of fish were continuous
	Crustacea toxicity	NOEC mg/l	1,344	23 d	Daphnia magna	Bulletin of Environmental Contamination other: 84/449/EEC: given by the Commissi
	Acute bacteria toxicity	(EC50 mg/l)	> 100	3 h	activated sludge of a predominantly domestic sewage	Study report (2010) OECD Guideline 209

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

BCF

CAS No	Chemical name	BCF	Species	Source
7803-55-6	ammonium trioxovanadate	< 0,036	Lactuca sativa	Study report (2003)

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 10 of 12

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

Send to a physico-chemical treatment facility under observation of official regulations.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2859
14.2. UN proper shipping name:	AMMONIUM METAVANADATE
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1
Classification code:	T5
Limited quantity:	500 g
Excepted quantity:	E4
Transport category:	2
Hazard No:	60
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2859
14.2. UN proper shipping name:	AMMONIUM METAVANADATE
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1
Classification code:	T5
Special Provisions:	802
Limited quantity:	500 g
Excepted quantity:	E4

Marine transport (IMDG)

14.1. UN number or ID number:	UN 2859
14.2. UN proper shipping name:	AMMONIUM METAVANADATE
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1
Special Provisions:	-
Limited quantity:	500 g
Excepted quantity:	E4
EmS:	F-A, S-A
Segregation group:	2 - ammonium compounds

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2859
14.2. UN proper shipping name:	AMMONIUM METAVANADATE
14.3. Transport hazard class(es):	6.1

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 11 of 12

14.4. Packing group:	II
Hazard label:	6.1
Limited quantity Passenger:	1 kg
Passenger LQ:	Y644
Excepted quantity:	E4
IATA-packing instructions - Passenger:	669
IATA-max. quantity - Passenger:	25 kg
IATA-packing instructions - Cargo:	676
IATA-max. quantity - Cargo:	100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	AMMONIUM METAVANADATE

14.6. Special precautions for user

Warning: Toxic.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):
Entry 65

Information according to 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,12.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ammonium monovanadate for analysis, ACS

Revision date: 30.05.2022

Product code: 22663

Page 12 of 12

Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.