

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Name: Ammonium Paratungstate

CAS #: 11120-25-5

Relevant identified uses of the substance: Scientific research and development

Supplier details:

Stanford Advanced Materials

E-mail: sales@samaterials.com

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

The substance is not classified as hazardous according to 29 CFR 1910 (OSHA GHS).

Hazards not otherwise classified

No information known.

Label elements

GHS label elements

Not applicable

Hazard pictograms

Not applicable

Signal word

Not applicable	;	. '		;	. '			
Hazard statements								
Not applicable		١.	`: -		1,	`; -		:
WHMIS classification								
Not controlled							:	,
Classification system	1			;	. '		;	
HMIS ratings (scale 0-4)		1	4					:
(Hazardous Materials Identification								
Health (acute effects) = 1				111			; * *	,
Flammability = 0Physical Hazard =	1							
Other hazards		. '		:	. '			
Results of PBT and vPvB assessm	ent	1,			1,			:
PBT:								
Not applicable.							: ' '	
vPvB:								
Not applicable.							:	. '
	() () () () () () () () () ()			1 1				
SECTION 2 COMPOS	ITION/II	NEO		TON (2 N 1 I	NODE	DIEN.	TC
SECTION 3. COMPOS		NFO	KIVIAI	ION	JII HIC	NGKE	DIEN	13
Chemical characterization: Substar	nces				,		;	
CAS# Description:								
11120-25-5 Ammonium tungsten o	xide hydrate	e	`: 		1,	`: 		:
Identification number(s):								

SECTION 4. FIRST AID MEASURES

Description of first aid measures

EC number: 234-364-9

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor, After swallowing Seek medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available. **SECTION 5. FIREFIGHTING MEASURES** Extinguishing media Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Nitrogen oxides (NOx) Tungsten oxides Advice for firefighters Protective equipment:

SECTION 6. ACCIDENTAL RELEASE MEASURES

Wear self-contained respirator.

Wear fully protective impervious suit.

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Pick up mechanically.

Prevention of secondary hazards:

No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Information about protection against explosions and fires:

The product is not flammable

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Specific end use(s)

No further relevant information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

No data

Exposure controls

Personal protective equipment

General protective and hygienic measuresThe usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls.

Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Impervious glove	es.										
Check protective	gloves	prior t	o each ι	ise for th	eir pro	per cond	lition.		`: 		:
The selection of s	suitable		s not on				rial, but a	also on	quality. (Quality wi	ill
from manufacture	er to ma	ınufac	turer.	1			:			:	
Material of glove	S										
Nitrile rubber, NE	BR	1,	`:		1,	`:		1,	`:		
Penetration time	of glove										
480	111			:::			: "			:"	,
Glove thickness	;			:			;			:	. '
0.11 mm	• :	1,	1		١,	1		1,	1		:
Safety glasses Body protection:	:	• ;	* :	:	• ;			• :		:"	
Protective work of	othing.	. '		:		1 1	;	. '		:	. '
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SECTION S	: ' '			: ' '			L PRO	OPEI	RTIES	;··	,

Information on basic physical and chemical properties

General Information

Protection of hands:

Appearance:

Form: Powder

Color: White

Odor: Odorless

Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Flammability (solid, gaseous)

Not determined.

Ignition temperature: Not determined

Decomposition temperature: Not determined

Auto igniting: Not determined.

Danger of explosion: Not determined.

Explosion limits:

Lower: Not determined

Upper: Not determined

Vapor pressure: Not applicable.

Density at 20 °C (68 °F): 2.3 g/cm³ (19.194 lbs/gal)

Relative densityNot determined.

Vapor density

Not applicable.

Evaporation rate

Not applicable.

Solubility in / Miscibility with Water: Soluble

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not applicable.

kinematic: Not applicable.

Other information

No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No information known.

Chemical stability

Stable under recommen	ided stora	age condit	ions.	, , ,		:	, , ,		;	
Thermal decomposition	/ conditio	ns to be a	avoided	d:						
Decomposition will not o	occur if us	ed and st	ored a	ccordir	ng to spec	ification	ns.			٠,
Possibility of hazardous	reactions	5								
Reacts with strong oxidi	zing ager	nts								
Conditions to avoid			:	, '		;	. '		:	. • •
No further relevant infor Incompatible materials:	mation av	/ailable.	:	1,	`:		÷,	3	. :	:.
Oxidizing agents									: '	
Hazardous decompositi				,			,	,		,
Nitrogen oxides				, '			. '			. ' '
Tungsten oxides				1,	`.		:,	1		:,
Information on toxicolog			:		11 14			11 3		
Acute toxicity:	· · · · · ·			1	`: 			`: :		٠.
No effects known.		٠	ė							
LD/LC50 values that are	e relevant	for classi	ticatior	1:-		,	,	•		,
No data			:	. '		:	. '		:	. • •
Skin irritation or corrosic May cause irritation	on:	:	:	1,	1		1,	1		:,
Eye irritation or corrosio	n:									
May cause irritation				1			,	,		,
Sensitization:			:	, '		;	, '		:	. • •
No sensitizing effects kr Germ cell mutagenicity:	1	:	:	1,	`:	• :	1,	1	. :	:.
No effects known. Carcinogenicity:		;				:''			:''	. :
No classification data or	n carcinog	genic prop	erties	of this	material is	s availa	ble fror	n the EPA	, İARC,	. '

NTP, OSHA or ACGIH. Reproductive toxicity: No effects known Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. SECTION 12. ECOLOGICAL INFORMATION **Toxicity** Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPvB assessment

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No furth	ėr releva	ant∤info	rmatior	n availab	le.	. '		:			1	
Not app				• :								
Not apply	licable.		÷,	1		1.	1		1,	1	• •	1.
PBT:		;			;	. '		1	. '		1	

Recommendation:

Uncleaned packagings:

Recommendation

Disposal must be made according to official regulations.

Recommended cleansing agent:

Water, if necessary with cleansing agents.

SECTION 14. TRANSPORT INFORMATION

Consult state, local or national regulations to ensure proper disposal.

UN-Number

DOT, ADN, IMDG, IATANot applicable

UN proper shipping name

DOT, ADN, IMDG, IATA

Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

Not applicable

Packing group

DOT, IMDG, IATA			:							
Not applicable										
Environmental hazards	3:	`; 		1,	`; 		1,	<u>'</u> ;		
Not applicable.										
Special precautions for	r user		: ' '			: ' '			: ' '	,
Not applicable.	. '		;	. '		;			1	
Transport in bulk accor	rding to	Annex II	of MAR	POL73	/78 and	the IBC C	Code			
Not applicable.	,	,		,	,	,	,	,		
Transport/Additional in	formati	on:	:''		• ;	: ' '	• ;		: ' '	
Marine Pollutant (DOT):			. '		:				
No.	1,	1		1,	1		1,	1	. :	
SECTION 15. I	1	ULAT(1				•		
Safety, health and env	ironme	ntal regul	ations/le	egislatio	n specifi	ic for the	substa	nce or m	ixture	,
GHS label elements	1.	1		1,	`:		1,	1		
Not applicable										
Hazard pictograms			: ' '			: ' '	1 1		111	,
Not applicable										
Signal word										
Not applicable	,									
	1.	`:		1,	4		:,	1:		
Hazard statements						• ;				
Hazard statements						• ;				
Hazard statements		1:	:"	• •			. :	• •	111	
Hazard statements Not applicable			:						:" ::	
Hazard statements Not applicable National regulations	produc	t are liste	ed in the	υ.S. Ει	nvironme				:" ::	
Hazard statements Not applicable National regulations All components of this	produc	t are liste	ed in the	U.S. E	nvironme /	ental Prot	ection	Agency T	Foxic	
Hazard statements Not applicable National regulations All components of this Substances Control Ac	produc ct Chen produc	t are liste nical subs t are liste oxic chem	ed in the stance Ir ed on the	U.S. Enventory Canad	nvironme y dian Non	ental Prot	ection c Subs	Agency	Foxic ist (NDSL	

California Proposition 65

Prop 65 - Chemicals known to cause cancer

Substance is not listed.

Prop 65 - Developmental toxicity

Substance is not listed.

Prop 65 - Developmental toxicity, female

Substance is not listed.

Prop 65 - Developmental toxicity, male

Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No

1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.