according to the Globally Harmonized System



## Selenium (10%) Solid Formulation

Vers 2.3	ion	Revision Date: 22.11.2023		S Number: )93369-00006	Date of last issue: 30.09.2023 Date of first issue: 21.11.2022
1. PI	RODUC	T AND COMPANY ID	ENT	IFICATION	
	Produc	t name	:	Selenium (10%)	Solid Formulation
	Other r	neans of identification	:	Coopers Permat	race Selenium Pellets for Cattle (47640)
	<b>Manufacturer or supplier's d</b> Company		letai :	ils MSD	
	Addres	S	:	Briahnager - Off Wagholi - Pune ·	Pune Nagar Road - India 412 207
	Teleph	one	:	+1-908-740-400	0
	Emerge	ency telephone number	r:	+1-908-423-600	0
	E-mail	address	:	EHSDATASTEW	VARD@msd.com
	Recom	mended use of the cl mended use tions on use	-	ical and restriction Veterinary produce Not applicable	
			•		

### 2. HAZARDS IDENTIFICATION

### Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

### Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

### **GHS Classification**

Specific target organ toxicity - : Category 2 repeated exposure

## **GHS** label elements

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	:	<b>Prevention:</b> P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

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### **Response:**

P319 Get medical help if you feel unwell.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin. May form explosive dust-air mixture during processing, handling or other means.

: Mixture

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Selenium	7782-49-2	>= 10 - < 20

### 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical ad- vice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air.
In case of skin contact	:	Get medical attention if symptoms occur. In case of contact, immediately flush skin with soap and plenty of water. Get medical attention if symptoms occur.
In case of eye contact	:	If in eyes, rinse well with water.
		Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and	:	May cause damage to organs through prolonged or repeated exposure.
delayed		Contact with dust can cause mechanical irritation or drying of the skin.
		Dust contact with the eyes can lead to mechanical irritation.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.
5. FIREFIGHTING MEASURES		

Suitable extinguishing media :

Water spray Alcohol-resistant foam Carbon dioxide (CO2)

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Unsuit media	Unsuitable extinguishing		Dry chemical None known.	
	ic hazards during fire-	:	Exposure to com	bustion products may be a hazard to health.
	Hazardous combustion prod-		Metal oxides	
Specifi ods	Specific extinguishing meth- ods		cumstances and Use water spray Remove undama so.	g measures that are appropriate to local cir- the surrounding environment. to cool unopened containers. aged containers from fire area if it is safe to do
	al protective equipment fighters	:		e, wear self-contained breathing apparatus.
6. ACCIDE	NTAL RELEASE MEA	SUF	RES	
tive eq	Personal precautions, protec- tive equipment and emer- gency procedures		Follow safe hand	otective equipment. Iling advice (see section 7) and personal pro- It recommendations (see section 8).
Environmental precautions		:	Retain and dispo	eakage or spillage if safe to do so. se of contaminated wash water. should be advised if significant spillages
Methods and materials for containment and cleaning up		:	tainer for disposa Avoid dispersal of with compressed Dust deposits sh es, as these may leased into the a Local or national posal of this mate employed in the mine which regul Sections 13 and	of dust in the air (i.e., clearing dust surfaces
7. HANDLING AND STORAGE				
Technical measures Local/Total ventilation Advice on safe handling		:	causing an explo Provide adequate and bonding, or i Use only with ad Do not breathe d Do not swallow. Avoid contact with	e precautions, such as electrical grounding nert atmospheres. equate ventilation. lust, fume, gas, mist, vapours or spray.

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<ul> <li>Handle in accordance with good industrial hygiene and practice, based on the results of the workplace exposure sessment</li> <li>Minimize dust generation and accumulation.</li> <li>Keep container closed when not in use.</li> <li>Keep away from heat and sources of ignition.</li> <li>Take precautionary measures against static discharges.</li> <li>Take care to prevent spills, waste and minimize release environment.</li> <li>Keep in properly labelled containers.</li> <li>Store in accordance with the particular national regulation</li> <li>Do not store with the following product types:</li> <li>Strong oxidizing agents</li> </ul>	e as-

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

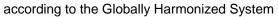
### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Selenium	7782-49-2	TWA	20 µg/m3 (OEB 3)	Internal
		Wipe limit	200 µg/100 cm2	Internal
		TWA	0.2 mg/m3	ACGIH
			(selenium)	

Engineering measures	<ul> <li>All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices). Minimize open handling.</li> </ul>

### Personal protective equipment

Respiratory protection Filter type Hand protection Material	:	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Particulates type Chemical-resistant gloves
Remarks Eye protection	:	Consider double gloving. Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or
Skin and body protection	:	aerosols. Work uniform or laboratory coat. Additional body garments should be used based upon the task





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Hygie	ne measures	suits) to avoid e Use appropriate contaminated cl : If exposure to cl flushing systems place. When using do Wash contamina The effective op engineering con appropriate deg	nemical is likely during typical use, provide eye s and safety showers close to the working not eat, drink or smoke. ated clothing before re-use. eration of a facility should include review of trols, proper personal protective equipment, owning and decontamination procedures, ne monitoring, medical surveillance and the

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	pellets
Colour	:	silver
		grey
Odour	:	No data available
Odour Threshold	:	No data available
рН	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, han- dling or other means.
Flammability (liquids)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	No data available

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D	Density		:	No data available	
S	Solubilit Wate	ty(ies) er solubility	:	No data available	
-	Partitior	n coefficient: n-	:	Not applicable	
-		nition temperature	:	No data available	
D	Decomp	position temperature	:	No data available	•
V	/iscosit Visc	y osity, kinematic	:	Not applicable	
E	xplosiv	ve properties	:	Not explosive	
С	Dxidizir	ng properties	:	The substance o	mixture is not classified as oxidizing.
Ν	lolecul	ar weight	:	No data available	•
Р	Particle	size	:	No data available	

### **10. STABILITY AND REACTIVITY**

Reactivity Chemical stability Possibility of hazardous reac- tions	Not classified as a reactivity hazard. Stable under normal conditions. May form explosive dust-air mixture during process dling or other means. Can react with strong oxidizing agents.	ing, han-
Conditions to avoid	Heat, flames and sparks. Avoid dust formation.	
Incompatible materials	Oxidizing agents	
Hazardous decomposition products	No hazardous decomposition products are known.	

### **11. TOXICOLOGICAL INFORMATION**

Information on likely routes of	:	Inhalation
exposure		Skin contact
		Ingestion
		Eye contact

### Acute toxicity

Not classified based on available information.

#### **Components:**

#### Selenium:

Acute oral toxicity

: LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401

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ersion 3	Revision Date: 22.11.2023		S Number: 093369-00006	Date of last issue: 30.09.2023 Date of first issue: 21.11.2022
Acute	inhalation toxicity	:	LC50 (Rat): > 5.6 Exposure time: 4 Test atmosphere Method: OPPTS	h : dust/mist
	corrosion/irritation assified based on avai	ilable	information.	
	us eye damage/eye i assified based on ava			
Respi	iratory or skin sensit	isatio	n	
	sensitisation assified based on ava	ilable	information.	
-	iratory sensitisation assified based on avai	ilable	information.	
Comp	oonents:			
Selen Test T Expos Specie Metho Resul Rema	Type sure routes es od t	:	Local lymph node Skin contact Mouse OECD Test Guide negative Based on data fro	
Not cl	cell mutagenicity assified based on avai	ilable	information.	
Selen				
	toxicity in vitro	:		rial reverse mutation assay (AMES) est Guideline 471
	<b>nogenicity</b> assified based on avai	ilable	information.	
-	oductive toxicity assified based on avai	ilable	information.	
<u>Comp</u>	oonents:			
Selen Effect	<b>ium:</b> s on fertility	:	Species: Rat Application Route Result: negative	generation reproduction toxicity stud e: Ingestion on data from similar materials

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rsion 3	Revision Date: 22.11.2023		OS Number: 093369-00006	Date of last issue: 30.09.2023 Date of first issue: 21.11.2022
Effect ment	s on foetal develop-	:	Species: Mouse Application Rout Result: negative	yo-foetal development e: Ingestion on data from similar materials
	<b>- single exposure</b> assified based on availa	ble	information.	
May c	<b>- repeated exposure</b> ause damage to organs ponents:	thr	ough prolonged o	repeated exposure.
Selen				
	sment	:	May cause dama exposure.	age to organs through prolonged or repeated
Rema	rks	:		al or regional regulation.
	assified based on availa		information.	
. ECOL(			information.	
ECOLO	DGICAL INFORMATION		information.	
ECOLO	DGICAL INFORMATION		information.	
ECOLO Ecoto <u>Comp</u> Selen	DGICAL INFORMATION	J	LC50 (Oncorhyn Exposure time: 9 Test substance: Method: OECD	chus mykiss (rainbow trout)): > 0.0262 mg/l 16 h Water Accommodated Fraction Fest Guideline 203 i.city at the limit of solubility
ECOLO Ecoto Comp Selen Toxici	DGICAL INFORMATION exicity <u>conents:</u> ium:	<b>J</b>	LC50 (Oncorhyn Exposure time: 9 Test substance: Method: OECD Remarks: No tox EC50 (Daphnia 1 Exposure time: 4 Test substance: Method: OECD	06 h Water Accommodated Fraction Fest Guideline 203 icity at the limit of solubility magna (Water flea)): > 0.1603 mg/l
Ecoto Ecoto Comp Selen Toxici aquati	DGICAL INFORMATION exicity <u>ponents:</u> ium: ty to fish ty to daphnia and other ic invertebrates	<b>J</b>	LC50 (Oncorhyn Exposure time: 9 Test substance: Method: OECD Remarks: No tox EC50 (Daphnia n Exposure time: 4 Test substance: Method: OECD Remarks: No tox ErC50 ( Pseudol mg/l Exposure time: 7 Test substance:	<ul> <li>b6 h</li> <li>Water Accommodated Fraction</li> <li>Fest Guideline 203</li> <li>icity at the limit of solubility</li> <li>magna (Water flea)): &gt; 0.1603 mg/l</li> <li>8 h</li> <li>Water Accommodated Fraction</li> <li>Fest Guideline 202</li> <li>icity at the limit of solubility</li> <li>kirchneriella subcapitata (algae)): &gt; 0.00173</li> </ul>
ECOLO Ecoto Comp Selen Toxici aquati	DGICAL INFORMATION exicity <u>ponents:</u> ium: ty to fish ty to daphnia and other ic invertebrates	<b>1</b> :	LC50 (Oncorhyn Exposure time: 9 Test substance: Method: OECD Remarks: No tox EC50 (Daphnia n Exposure time: 4 Test substance: Method: OECD Remarks: No tox ErC50 ( Pseudol mg/l Exposure time: 7 Test substance: Method: OECD EC50 (activated Exposure time: 3 Method: OECD	<ul> <li>b6 h</li> <li>Water Accommodated Fraction</li> <li>Fest Guideline 203</li> <li>icity at the limit of solubility</li> <li>magna (Water flea)): &gt; 0.1603 mg/l</li> <li>8 h</li> <li>Water Accommodated Fraction</li> <li>Fest Guideline 202</li> <li>icity at the limit of solubility</li> <li>kirchneriella subcapitata (algae)): &gt; 0.00173</li> <li>72 h</li> <li>Water Accommodated Fraction</li> <li>Fest Guideline 201</li> <li>sludge): &gt; 100 mg/l</li> </ul>

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ic	city)			Test substance: V	3 d nchus mykiss (rainbow trout) Vater Accommodated Fraction city at the limit of solubility	
а	Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)		:	NOEC: >= 0.00342 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 Remarks: No toxicity at the limit of solubility		
E	Ecotox	icology Assessment				
C	Chronic	e aquatic toxicity	:		asting harmful effects to aquatic life. on national or regional regulation.	
		e <b>nce and degradabili</b> a available	ty			
		<b>umulative potential</b> a available				
		<b>y in soil</b> a available				
		adverse effects a available				
13. DI	ISPOS	AL CONSIDERATION	S			
	-	al methods from residues	:	Do not dispose of	waste into sewer.	

Waste from residues	Do not dispose of waste into	sewer.
	Dispose of in accordance wit	h local regulations.
Contaminated packaging	Empty containers should be dling site for recycling or disp If not otherwise specified: Dis	

### 14. TRANSPORT INFORMATION

### International Regulations

UNRTDG

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

### IMDG-Code

Not regulated as a dangerous good

## Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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### Special precautions for user

Not applicable

#### 15. REGULATORY INFORMATION

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

#### The components of this product are reported in the following inventories:

AICS	: not determined
DSL	: not determined
IECSC	: not determined

#### **16. OTHER INFORMATION**

Revision Date :		22.11.2023	
Further information			
Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/	
Date format	:	dd.mm.yyyy	
Full text of other abbreviat	ions		
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)	
ACGIH / TWA	:	8-hour, time-weighted average	

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation: DSL - Domestic Substances List (Canada): ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumu-

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lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

IN / EN