



Vers 2.4	ion	Revision Date: 28.09.2024		S Number: 993346-00008	Date of last issue: 06.04.2024 Date of first issue: 21.11.2022			
Sect	Section 1: Identification							
	Product identifier		:	Selenium Solid F	ormulation			
	Other means of identifica- tion		:	Coopers Permatrace 3 Year Selenium Pellets for Sheep (47639)				
	Recommended use of the che		nem	ical and restriction	ons on use			
	Recommended use Restrictions on use		:	Veterinary product Not applicable				
	Manufacturer or supplier's o		letai	ls				
	Compa	ny	:	MSD				
	Addres	S	:	50 Tuas West Dr Singapore - Sing				
	Teleph	one	:	+1-908-740-4000)			
	Emerge	ency telephone number	• :	65 6697 2111 (24	4/7/365)			
	E-mail	address	:	EHSDATASTEW	ARD@msd.com			

Section 2: Hazard identification

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

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.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Selenium	7782-49-2	>= 1 -< 10



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Section 4: First-aid measures

Description of necessary first-aid measures							
General advice	 In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice. 						
If inhaled	 If inhaled, remove to fresh air. Get medical attention if symptoms occur. 						
In case of skin contact	: 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 a	nd effects, both acute and delayed						
Risks	 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).						
Indication of any immediate	medical attention and special treatment needed						
Treatment	: Treat symptomatically and supportively.						

Section 5: Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	: None known.
Special hazards arising fron	the substance or mixture
Specific hazards during fire- fighting	: Exposure to combustion products may be a hazard to health.
Hazardous combustion prod- ucts	: Metal oxides
Special protective actions for	r firo-fightors

Special protective equipment : In the event of fire, wear self-contained breathing apparatus. for firefighters Use personal protective equipment. Version



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Spec ods	ific extinguishing meth-	:	cumstances and Use water spray	ng measures that are appropriate to local cir- I the surrounding environment. I to cool unopened containers. aged containers from fire area if it is safe to do
Section 6	: Accidental release m	eas	ures	
	precautions, protectiv onal precautions	re ec :	Use personal pr Follow safe han	ergency procedures otective equipment. dling advice (see section 7) and personal pro- nt recommendations (see section 8).
	nental precautions conmental precautions	:	Prevent further I Retain and dispo	the environment. eakage or spillage if safe to do so. ose of contaminated wash water. s should be advised if significant spillages ined.
	and materials for cont ods for cleaning up	ainn :	Sweep up or vac tainer for dispos Avoid dispersal with compressed Dust deposits sh es, as these mai leased into the a Local or nationa posal of this mai employed in the mine which regu	cuum up spillage and collect in suitable con- al. of dust in the air (i.e., clearing dust surfaces
Section 7	: Handling and storage	e		
Prec	autions for safe handli	ing		
Loca	nical measures I/Total ventilation ce on safe handling	:	causing an explo Provide adequat and bonding, or Use only with ac Do not breathe	may accumulate and ignite suspended dust osion. te precautions, such as electrical grounding inert atmospheres. lequate ventilation. dust, fume, gas, mist, vapours or spray.
				th eyes. or repeated contact with skin. dance with good industrial hygiene and safety



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Hygi	ene measures	sessment Minimize dust gu Keep container Keep away from Take precaution Take care to pre environment. If exposure to cl flushing systems place. When using do Wash contamina The effective op engineering con appropriate deg	on the results of the workplace exposure as- eneration and accumulation. closed when not in use. heat and sources of ignition. ary measures against static discharges. event spills, waste and minimize release to the memical is likely during typical use, provide eye is 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 ative controls.				
Conditions for safe storage,		e, including any inco	mpatibilities				
	ditions for safe storage	Store in accorda	/ labelled containers. ance with the particular national regulations.				
Materials to avoid		. Do not store with	: Do not store with the following product types:				

Strong oxidizing agents

Section 8: Exposure controls/personal protection

Control parameters

Occupational Exposure Limits

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

Appropriate engineering control measures : 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.

Individual protection measures, such as personal protective equipment (PPE)

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Eye/fa	ace protection	:	If the work environmists or aerosols Wear a faceshie	esses with side shields or goggles. conment or activity involves dusty conditions, s, wear the appropriate goggles. Id or other full face protection if there is a ct contact to the face with dusts, mists, or			
Skin protection			Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis- posable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially				
Resp	iratory protection	:	sure assessmen	exhaust ventilation is not available or expo- t demonstrates exposures outside the rec-			
	lter type protection	:	ommended guid Particulates type	elines, use respiratory protection.			
Ma	aterial	:	Chemical-resista	ant gloves			
Re	emarks	:	Consider double	gloving.			
ection 9	: Physical and chemica	ıl pr	operties				
Appe	arance	:	pellets				
Colou	ır	:	silver				
			grey				
Odou	r	:	No data availab	le			
Odou	r Threshold	:	No data availab	le			
pН		:	No data availab	le			
Meltir	ng point/freezing point	:	No data availab	le			
Initial range	boiling point and boiling	:	No data availab	le			
Flash	point	:	Not applicable				
Evap	oration rate	:	Not applicable				
Flam	mability (solid, gas)	:	May form explo dling or other m	sive dust-air mixture during processing, han- eans.			
Flam	mability (liquids)	:	Not applicable				
	r explosion limit / Upper nability limit	:	No data availab	le			

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	r explosion limit / Lower nability limit	No data available	
Vapo	ur pressure	Not applicable	
Relat	ive vapour density	Not applicable	
Relat	ive density	No data available	
Dens	ity	No data available	
	pility(ies) ater solubility	No data available	
	ion coefficient: n-	Not applicable	
	ol/water ignition temperature	No data available	
Deco	mposition temperature	No data available	
Visco Vi	sity scosity, kinematic	Not applicable	
Explo	osive properties	Not explosive	
Oxidi	zing properties	The substance or m	ixture is not classified as oxidizing.
Moleo	cular weight	No data available	
	cle characteristics cle size	No data available	

Section 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 processing, han- dling or other means. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks. Avoid dust formation.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

Section 11: Toxicological information

Information on likely routes of	:	Inhalation
exposure		Skin contact
		Ingestion



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			F						
			Eye contact						
Acute	Acute toxicity								
Not c	lassified based on ava	ilable	information.						
0									
Com	oonents:								
Seler	nium:								
Acute	e oral toxicity	:	() /	000 mg/kg Test Guideline 401					
Expos Test a		LC50 (Rat): > 5. Exposure time: 4 Test atmosphere Method: OPPTS	4 h e: dust/mist						

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Selenium:

Test Type :	Local lymph node assay (LLNA)
Exposure routes :	Skin contact
Species :	Mouse
Method :	OECD Test Guideline 429
Result :	negative
Remarks :	Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

Selenium:

Genotoxicity in vitro

: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative

Carcinogenicity

Not classified based on available information.



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-	oductive toxicity lassified based on availa	able	information.	
Com	ponents:			
Seler	nium:			
	ts on fertility	:	Species: Rat Application Route Result: negative	generation reproduction toxicity study e: Ingestion on data from similar materials
Effec ment	ts on foetal develop-	:	Species: Mouse Application Route Result: negative	yo-foetal development e: Ingestion on data from similar materials
Not c	F - single exposure lassified based on availa	able	information.	
	F - repeated exposure lassified based on availa	able	information.	
Com	ponents:			
Seler	nium:			
Asse	ssment	:	May cause dama exposure.	ge to organs through prolonged or repeated
Rema	arks	:		al or regional regulation.
•	ration toxicity lassified based on availa	able	information.	
ection 1	2: Ecological informati	on		
Toxic	zitv			
	ponents:			
	nium: iity to fish	:	Exposure time: 9 Test substance: Method: OECD T	chus mykiss (rainbow trout)): > 0.0262 mg/l 6 h Water Accommodated Fraction Fest Guideline 203 icity at the limit of solubility
Toxic	ity to daphnia and other	:	EC50 (Daphnia n	nagna (Water flea)): > 0.1603 mg/l



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Toxicit plants	y to algae/aquatic	:	mg/l Exposure time: 7 Test substance: 1	rchneriella subcapitata (algae)): > 0.001 2 h Water Accommodated Fraction ⁻ est Guideline 201
Toxicit icity)	Toxicity to fish (Chronic tox- icity)		NOEC (Oncorhynchus mykiss (rainbow trout)): >= 0.00157 mg/l Exposure time: 28 d Test substance: Water Accommodated Fraction Remarks: No toxicity at the limit of solubility	
aquatio	Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)		NOEC (Daphnia magna (Water flea)): >= 0.00342 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 Remarks: No toxicity at the limit of solubility	
Toxicit	y to microorganisms	:	Exposure time: 3 Method: OECD T	sludge): > 100 mg/l h est Guideline 209 on data from similar materials
	xicology Assessment	:		asting harmful effects to aquatic life. on national or regional regulation.
	tence and degradabili a available	ty		
	cumulative potential a available			
	ty in soil a available			
••	adverse effects a available			

Section 13: Disposal considerations

Disposal methods		
Waste from residues	:	Do not dispose of waste into sewer. Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste han- dling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.



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Section 14: Transport information

International Regulations

UNRTDG UN number UN proper shipping name Transport hazard class(es) Subsidiary risk Packing group Labels Environmentally hazardous	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable no
IATA-DGR UN/ID No. UN proper shipping name Transport hazard class(es) Subsidiary risk Packing group Labels Packing instruction (cargo aircraft) Packing instruction (passen- ger aircraft)	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable
IMDG-Code UN number UN proper shipping name Transport hazard class(es) Subsidiary risk Packing group Labels EmS Code Marine pollutant	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Special precautions for user

Not applicable

Section 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations. Environmental Protection and Management Act and : Not applicable Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable



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	Regula	tions			
	The co AICS	mponents of this pro	oduc :	et are reported in to not determined	he following inventories:
	DSL		:	not determined	
	IECSC		:	not determined	
Section 16: Other information					
	Revisio	on Date	:	28.09.2024	
	Furthe	r information			
		s of key data used to e the Safety Data	:		data, data from raw material SDSs, OECD arch results and European Chemicals Agen- ropa.eu/
	Date fo	ormat	:	dd.mm.yyyy	
	Full text of other abbreviation		ons		
	ACGIH SG OE		:	Singapore. Workp	eshold Limit Values (TLV) blace Safety and Health (General Provisions) t Schedule Permissible Exposure Limits of 5.
		/ TWA L / PEL (long term)	:	8-hour, time-weig Permissible Expo	hted average sure Level (PEL) Long Term

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, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substanc-

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es; (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.

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