



Versio 3.3	on	Revision Date: 2024/09/28		S Number: 993386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21
1. PR	ODUC	T AND COMPANY IDE	ENT	IFICATION	
F	Product	name	:	Selenium Solid F	Formulation
(Other n	neans of identification	:	Coopers Permatrace 3 Year Selenium Pellets for Sheep (47639)	
N	Manufa	cturer or supplier's d	letai	ls	
	Compa	••	:	MSD	
Address		:	126 E. Lincoln Av Rahway, New Je	venue ersey U.S.A. 07065	
٦	Telepho	one	:	908-740-4000	
E	Emerge	ency telephone number	• :	1-908-423-6000	
E	E-mail a	address	:	EHSDATASTEW	/ARD@msd.com
Recommended use of the ch			nem	ical and restriction	ons on use
Recommended use Restrictions on use		:	Veterinary produ Not applicable	ct	

2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Iron	7439-89-6	>= 60 -<= 100
Selenium	7782-49-2	>= 2.5 -< 10



Selenium Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/22
3.3	2024/09/28	11093386-00007	Date of first issue: 2022/11/21

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
If inhaled	:	advice. 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.
In case of eye contact	:	Get medical attention if symptoms occur. 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	:	Contact with dust can cause mechanical irritation or drying of the skin.
delayed Protection of first-aiders	:	Dust contact with the eyes can lead to mechanical irritation. 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) Dry chemical
Unsuitable extinguishing media	:	None known.
Specific hazards during fire- fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion prod- ucts	:	Metal oxides
Specific extinguishing meth- ods	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES



Version 3.3	Revision Date: 2024/09/28		OS Number: 093386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21		
tive ger	sonal precautions, protec- equipment and emer- ncy procedures vironmental precautions	:	Follow safe hand tective equipmen Avoid release to t Prevent further le Retain and dispos	akage or spillage if safe to do so. se of contaminated wash water. should be advised if significant spillages		
-	thods and materials for atainment and cleaning up	:	tainer for disposa Avoid dispersal o with compressed Dust deposits sho es, as these may leased into the at Local or national posal of this mate employed in the o mine which regula Sections 13 and	f dust in the air (i.e., clearing dust surfaces		
7. HANI	DLING AND STORAGE					
Teo	chnical measures	:	causing an explo	nay accumulate and ignite suspended dust sion. e precautions, such as electrical grounding nert atmospheres.		
	al/Total ventilation vice on safe handling	:	Do not breathe de Do not swallow. Avoid contact with Avoid prolonged Handle in accorda practice, based o sessment Minimize dust gen Keep container co Keep away from Take precautiona	equate ventilation. ust, fume, gas, mist, vapours or spray. h eyes. or repeated contact with skin. ance with good industrial hygiene and safety n the results of the workplace exposure as- neration and accumulation. losed when not in use. heat and sources of ignition. ary measures against static discharges. yent spills, waste and minimize release to the		
Co	nditions for safe storage	:	Keep in properly	labelled containers.		
Ma	Materials to avoid		Store in accordance with the particular national regulations. Do not store with the following product types: Strong oxidizing agents			

Strong oxidizing agents



Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/22
3.3	2024/09/28	11093386-00007	Date of first issue: 2022/11/21

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Iron	7439-89-6	NAB	1 mg/m3 (Iron)	ID OEL
Selenium	7782-49-2	NAB	0.05 mg/m3 (selenium)	ID OEL
		TWA	20 µg/m3 (OEB 3)	Internal
		Wipe limit	200 µg/100 cm2	Internal
		TWA	0.2 mg/m3 (selenium)	ACGIH

Engineering 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 con- tainment devices). Minimize open handling.
Personal protective equipment	t
Respiratory protection	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection.
Filter type Hand protection	Particulates type
Material	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 aerosols.
Skin and body 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 contaminated clothing.
Hygiene measures	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the work- ing place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.



Version 3.3	Revision Date: 2024/09/28		S Number:)93386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21		
			engineering contr appropriate degov industrial hygiene use of administrat	ration of a facility should include review of ols, proper personal protective equipment, wning and decontamination procedures, monitoring, medical surveillance and the tive controls.		
9. PHYS	ICAL AND CHEMICAL PI	ROP	ERTIES			
Арр	pearance	:	pellets			
Col	our	:	silver			
			grey			
Odd	bur	:	No data available	9		
Odd	our Threshold	:	No data available	9		
рН		:	No data available			
Mel	ting point/freezing point	:	No data available			
Initi rang	al boiling point and boiling ge	:	No data available	9		
Flas	sh point	:	Not applicable			
Eva	poration rate	:	Not applicable			
Flar	nmability (solid, gas)	:	May form explosi dling or other me	ive dust-air mixture during processing, han- ans.		
Flar	mmability (liquids)	:	Not applicable			
	per explosion limit / Upper nmability limit	:	No data available	9		
	ver explosion limit / Lower nmability limit	:	No data available	9		
Vap	oour pressure	:	Not applicable			
Rel	ative vapour density	:	Not applicable			
Rel	ative density	:	No data available	9		
Der	nsity	:	No data available	9		
	ubility(ies) Water solubility	:	No data available	9		
	Partition coefficient: n- octanol/water		Not applicable			

SAFETY DATA SHEET



Selenium Solid Formulation

Version 3.3	Revision Date: 2024/09/28	SDS Num 1093386		Date of last issue: 2023/11/22 Date of first issue: 2022/11/21			
Auto-	ignition temperature	: No d	ata available	9			
Deco	mposition temperature	: No d	ata available	9			
Visco Vi	sity scosity, kinematic	: Not applicable					
Explo	sive properties	: Not e	explosive				
Oxidi	zing properties	: The	substance o	r mixture is not classified as oxidizing.			
Moleo	cular weight	: No d	ata available	9			
	cle characteristics cle size	: No d	ata available	9			
10. STAB	ILITY AND REACTIVITY						
	tivity nical stability ibility of hazardous reac-	: Stabl : May dling	e under nor form explosi or other me	a reactivity hazard. mal conditions. ive dust-air mixture during processing, han- ans. rong oxidizing agents.			
Incon Haza	Conditions to avoid Incompatible materials Hazardous decomposition products		 Heat, flames and sparks. Avoid dust formation. Oxidizing agents No hazardous decomposition products are known. 				
11. TOXIC	OLOGICAL INFORMAT	N					
Inforr expos	nation on likely routes of sure	Skin o Inges	contact				
	e toxicity lassified based on availa	e informa	ation.				
<u>Com</u>	ponents:						
Iron: Acute	Iron: Acute oral toxicity		(Rat): > 5,0	00 mg/kg			
Acute	Acute inhalation toxicity		LC50 (Rat): > 0.15 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhala tion toxicity				

Version



Date of last issue: 2023/11/22

Selenium Solid Formulation

Revision Date:

Revision Date: 2024/09/28	SDS Number: 11093386-00007	Date of last issue: 2023/11/2 Date of first issue: 2022/11/2					
nium:							
e oral toxicity	: LD50 (Rat): > 5, Method: OECD	000 mg/kg Test Guideline 401					
inhalation toxicity	: LC50 (Rat): > 5. Exposure time: 4 Test atmosphere Method: OPPTS	4 h e: dust/mist					
corrosion/irritation lassified based on ava	ailable information.						
ponents:							
ies	: Rabbit						
	ailable information.						
<u>oonents:</u>							
ies	: Rabbit						
		deline 405					
Respiratory or skin sensitisation							
sensitisation							
lassified based on ava	ailable information.						
•							
lassified based on ava	ailable information.						
ponents:							
sure routes	: Skin contact						
ies	: Guinea pig						
IT	: negative						
nium:							
Туре	: Local lymph nod	le assay (LLNA)					
sure routes	: Skin contact						
ies od	: Mouse : OECD Test Guid	deline 429					
	: negative						
lt	i nogativo						
lt arks		rom similar materials					
	hium: a oral toxicity a inhalation toxicity corrosion/irritation lassified based on avain ponents: ies od lt bus eye damage/eye lassified based on avain ponents: ies lt bus ponents: ies it ponents: ies it ponents: issensitisation lassified based on avain ponents: issensitisation lassified based on avain ponents: sure routes ies lt hium: Type	hium: a) oral toxicity : LD50 (Rat): > 5, Method: OECD a) inhalation toxicity : LC50 (Rat): > 5, Exposure time: - Test atmosphere Method: OPPTS corrosion/irritation lassified based on available information. Denents: ies : Rabbit idd : OECD Test Guid idd : OECD Test Guid idd : OECD Test Guid idd : No skin irritation lassified based on available information. Doments: ies : Rabbit it : No eye irritation lassified based on available information. DecCD Test Guid irratory or skin sensitisation sensitisation lassified based on available information. irratory sensitisation lassified based on available information. irratory sensitisation lassified based on available information. ponents: sure routes : Skin contact ies : Guinea pig it : negative sure routes : Skin contact ies <td< td=""></td<>					

SDS Number:



Selenium Solid Formulation

rsion 3	Revision Date: 2024/09/28		Number: 93386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21
Germ	cell mutagenicity			
	assified based on avai	ilable ir	formation.	
<u>Comp</u>	oonents:			
Iron:				
Geno	toxicity in vitro		Test Type: Bac Result: negative	terial reverse mutation assay (AMES) e
Selen	ium:			
Geno	toxicity in vitro	I		terial reverse mutation assay (AMES) Test Guideline 471 e
	nogenicity		formation	
	assified based on avai	liable ir	iormation.	
-	oductive toxicity assified based on avai	ilable ir	formation.	
	oonents:			
Seler				
	s on fertility	: -	Fest Type: Two	-generation reproduction toxicity study
			Species: Rat Application Rou	ite: Indestion
			Result: negative	
		I	Remarks: Base	d on data from similar materials
Effect	s on foetal develop-			oryo-foetal development
ment			Species: Mouse Application Rou	
		I	Result: negative	9
				d on data from similar materials
STOT	- single exposure			
	assified based on avai	ilable ir	formation.	
STOT	- repeated exposure	•		
	assified based on avai		formation.	
Com	oonents:			
Iron:				
	sure routes		nhalation (dust	
Asses	ssment			ealth effects observed in animals at concer

tions of 0.2 mg/l/6h/d or less.



ersion 3	Revision Date: 2024/09/28		OS Number: 093386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21					
Seler Asses	ium: ssment	:		age to organs through prolonged or repeate					
Rema	Remarks		exposure. : Based on national or regional regulation.						
Repe	ated dose toxicity								
<u>Com</u>	oonents:								
Iron:									
Speci NOAE Applio		:	Rat 5 mg/m3 inhalation (dust/	mist/fume)					
	sure time	:	28 Days	niouranio)					
	OGICAL INFORMATIO	N							
	OGICAL INFORMATIO	N							
Ecoto		N							
Ecoto <u>Com</u> Iron:	oxicity ponents:	N							
Ecoto <u>Com</u> Iron:	oxicity	N :	LC50 (Danio rer Exposure time: 9	io (zebra fish)): > 50,000 mg/l 96 h					
Ecoto <u>Com</u> Iron: Toxic	oxicity ponents:	:	Exposure time: 9 EC50 (Daphnia Exposure time: 4	96 h magna (Water flea)): > 100 mg/l					
Ecoto <u>Comp</u> Iron: Toxic Toxic aquat	oxicity oonents: ity to fish ity to daphnia and other	:	Exposure time: 9 EC50 (Daphnia Exposure time: 4	96 h magna (Water flea)): > 100 mg/l 48 h Test Guideline 202 g/l					
Ecoto <u>Comp</u> Iron: Toxic Toxic aquat	oxicity ponents: ity to fish ity to daphnia and other ic invertebrates ity to microorganisms	:	Exposure time: 9 EC50 (Daphnia Exposure time: 4 Method: OECD EC50: 10,000 m	96 h magna (Water flea)): > 100 mg/l 48 h Test Guideline 202 g/l					
Ecoto Comp Iron: Toxic Toxic aquat Toxic	oxicity ponents: ity to fish ity to daphnia and other ic invertebrates ity to microorganisms	:	Exposure time: 9 EC50 (Daphnia Exposure time: 4 Method: OECD EC50: 10,000 m Exposure time: 9 LC50 (Oncorhyr Exposure time: 9 Test substance: Method: OECD	96 h magna (Water flea)): > 100 mg/l 48 h Test Guideline 202 g/l 3 h					
Ecoto Comp Iron: Toxic Toxic aquat Toxic Seler Toxic	oxicity bonents: ity to fish ity to daphnia and other ic invertebrates ity to microorganisms hium:	: : :	Exposure time: 9 EC50 (Daphnia Exposure time: 4 Method: OECD EC50: 10,000 m Exposure time: 3 LC50 (Oncorhyr Exposure time: 9 Test substance: Method: OECD Remarks: No too EC50 (Daphnia Exposure time: 4 Test substance: Method: OECD	96 h magna (Water flea)): > 100 mg/l 48 h Test Guideline 202 g/l 3 h Water Accommodated Fraction Test Guideline 203 kicity at the limit of solubility magna (Water flea)): > 0.1603 mg/l					



Version 3.3	Revision Date: 2024/09/28		OS Number: 093386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21
			Exposure time: 72 Test substance: V Method: OECD T	Vater Accommodated Fraction
Toxic icity)	to fish (Chronic tox-	:	mg/l Exposure time: 28 Test substance: V	chus mykiss (rainbow trout)): >= 0.00157 3 d Vater Accommodated Fraction city at the limit of solubility
	ity to daphnia and other tic invertebrates (Chron- icity)	:	Exposure time: 2 Test substance: V Method: OECD T	Vater Accommodated Fraction
Toxic	ity to microorganisms	:	Exposure time: 3 Method: OECD T	
Ecot	oxicology Assessment			
	nic aquatic toxicity	:		asting harmful effects to aquatic life. on national or regional regulation.
	istence and degradabili ata available	ty		
	ccumulative potential ata available			
	i lity in soil ata available			
	r adverse effects ata available			
No da		IS		

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.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG



Version 3.3	Revision Date: 2024/09/28		Number: 3386-00007	Date of last issue: 2023/11/22 Date of first issue: 2022/11/21
Prope Class Subsi Packi Label	UN number Proper shipping name Class Subsidiary risk Packing group Labels Environmentally hazardous		ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable	
IATA UN/IE Prope Class Subsi Packi Label Packi aircra Packi	-DGR D No. er shipping name idiary risk ng group s ng instruction (cargo	: N : N : N : N	ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable	
UN nu Prope Class Subsi Packi Label EmS Marin	idiary risk ng group s Code ie pollutant		ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable ot applicable	
Not a Spec	sport in bulk according pplicable for product as ial precautions for use pplicable	supplie		OL 73/78 and the IBC Code

15. REGULATORY INFORMATION

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

Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.

Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health

Hazardous substances that must be registered : Not applicable

Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances

Hazardous substances approved for use

: Not applicable



Versi 3.3	ion	Revision Date: 2024/09/28		0S Number: 093386-00007			of last issue: 2023/11/22 of first issue: 2022/11/21
	Prohibit	ed substances				:	Not applicable
	Restrict	ed substances				:	Not applicable
	Regula Materia		f Tr	ade No. 7 of 2022	on	Dis	stribution and Control of Hazardous
	•••	hazardous materials s Annex I	subj	ect to distribution a	and	:	Not applicable
	Type of hazardous materials subject to distribution and : Not applicable control, Annex II						Not applicable
	The co	mponents of this pro	duc	t are reported in t	the	foll	owing inventories:
	AICS		:	not determined			
	DSL		:	not determined			
	IECSC		:	not determined			
16. C	THER	INFORMATION					
	Revisio	n Date		2024/09/28			
		rinformation	•	202 1/00/20			
	Source	s of key data used to the Safety Data	:		arch	n res	lata from raw material SDSs, OECD sults and European Chemicals Agen- ı/
	Date fo	rmat	:	yyyy/mm/dd			
	Full tex	t of other abbreviation	ons				
	ACGIH ID OEL		:	USA. ACGIH Thre Indonesia. Occup			Limit Values (TLV) Exposure Limits
	ACGIH ID OEL		:	8-hour, time-weig Long term exposu			
	AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMF Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated w x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedu ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated w x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized St tem; GLR - Good Laboratory Practice; IARC - International Agency for Pesearch on Cancer: IARC						

tem; 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 Or-

SAFETY DATA SHEET



Selenium Solid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/22
3.3	2024/09/28	11093386-00007	Date of first issue: 2022/11/21

ganisation 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 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.

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