

according to the Hazardous Products Regulations

Bismuth Subnitrate Formulation

4.0 09/28/2024 656833-00022 Date of first issue: 05/02/2016	4.0 09/28/2024 656833-00022	ion Revision Date: SDS Number: Date of last issue: 09/30/2023
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SECTION 1. IDENTIFICATION

Product name	:	Bismuth Subnitrate Formulation
Other means of identification	:	No data available

Manufacturer or supplier's details

Company name of supplier	:	Merck & Co., Inc
Address	:	126 E. Lincoln Avenue
		Rahway, New Jersey U.S.A. 07065
Telephone	:	908-740-4000
Emergency telephone	:	1-908-423-6000
E-mail address	:	EHSDATASTEWARD@merck.com
	-	

Recommended use of the chemical and restrictions on use

Recommended use	:	Veterinary product
Restrictions on use	:	Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Skin sensitization	:	Sub-category 1B
	:	Category 1 (Central nervous system)

GHS label elements

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H317 May cause an allergic skin reaction. H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure.
Precautionary Statements	:	Prevention: P260 Do not breathe dust, fume, gas, mist, vapors or spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves.
		Response: P302 + P352 IF ON SKIN: Wash with plenty of water. P314 Get medical attention if you feel unwell. P333 + P313 If skin irritation or rash occurs: Get medical atten-



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		tion. P362 + P364 T reuse.	ake off contaminated clothing and wash it before			
		Disposal: P501 Dispose of contents and container to an approved waste disposal plant.				
Othe	r hazards					

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
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Components	s
------------	---

eempenente			
Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Bismuth hydroxide nitrate oxide	Bismuth sub- nitrate	1304-85-4	>= 60 - < 80 *
Petrolatum	No data availa- ble	8009-03-8	>= 10 - < 30 *
Zinc oxide	Zinc monoxide	1314-13-2	>= 5 - < 10 *
Benzyl alcohol	Benzenemetha- nol	100-51-6	>= 1 - < 5 *

^{*} Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

:	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, remove to fresh air. Get medical attention if symptoms occur.
:	In case of contact, immediately flush skin with soap and plenty of water.
	Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
:	May cause an allergic skin reaction. Causes damage to organs through prolonged or repeated exposure. 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).
	::



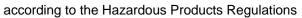
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	Notes to	o physician	:	Treat symptomatically and supportively.		
SEC	TION 5	. FIRE-FIGHTING MEA	ASL	IRES		
	Suitable extinguishing media		:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical		
	Unsuitable extinguishing media		:	None known.		
	Specific hazards during fire fighting		:	Exposure to comb	oustion products may be a hazard to health.	
	Hazardous combustion prod- ucts		:	Nitrogen oxides (N Metal oxides Carbon oxides	NOx)	
	Specific extinguishing meth- ods		:	cumstances and t Use water spray t	measures that are appropriate to local cir- he surrounding environment. o cool unopened containers. ged containers from fire area if it is safe to do	
	Special protective equipment for fire-fighters		:	In the event of fire Use personal prot	e, wear self-contained breathing apparatus. ective equipment.	

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : tive equipment and emer- gency procedures	Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions :	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for : containment and cleaning up	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.





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			nd 15 of this SDS provide information regarding r national requirements.			
SECTION	7. HANDLING AND ST	TORAGE				
Local	nical measures /Total ventilation e on safe handling	CONTROLS/F : Use only with : Do not get on Do not breath Do not swallow Avoid contact Wash skin tho Handle in acc practice, base assessment Do not eat, dr				
Cond	itions for safe storage	: Keep in prope	 Keep in properly labeled containers. Store in accordance with the particular national regulations. 			
Mate	rials to avoid	: Do not store v Strong oxidizi	vith the following product types: ng agents substances and mixtures			

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Petrolatum	8009-03-8	TWA (Mist)	5 mg/m³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist - Inhalable dust)	5 mg/m³	CA QC OEL
		TWA (Mist)	1 mg/m ³	CA BC OEL
		TWA (Inhalable particulate matter)	5 mg/m³	ACGIH
Zinc oxide	1314-13-2	TWA (Res- pirable)	2 mg/m ³	CA AB OEL
		STEL (Res- pirable)	10 mg/m³	CA AB OEL
		TWA (Res- pirable)	2 mg/m ³	CA BC OEL
		STEL (Res-	10 mg/m ³	CA BC OEL



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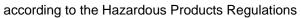
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		S Number: 6833-00022		t issue: 09/30/202 t issue: 05/02/20			
		1		1	1	1	
				pirable)			
				TWAEV	2 mg/m³	CA QC OEL	
				(respirable			
				dust)	40		
				STEV (res-	10 mg/m ³	CA QC OEL	
				pirable dust) TWA	0	ACGIH	
				(Respirable	2 mg/m ³	ACGIN	
				particulate			
				matter)			
				STEL	10 mg/m ³	ACGIH	
				(Respirable	10 mg/m		
				particulate			
				matter)			
Engir	neering measures	:			especially in conf concentrations.	ined areas.	
Perso	onal protective equip	ment					
Respi	iratory protection	:	If adequate lo	ocal exhaust ven	tilation is not avai	ilable or	
		exposure ass	s outside the				
			recommended guidelines, use respiratory protection.				
	ter type protection	:	Combined particulates and organic vapor type				
Ma	aterial	:	Chemical-resistant gloves				
Re	emarks	:	on the concert time is not de For special apresistance to gloves with the	ntration specific termined for the oplications, we r chemicals of the	ds against chemi to place of work. product. Change ecommend clarify aforementioned cturer. Wash han cday.	Breakthrough gloves often! ving the protective	
Eve p	protection	:			protective equipme	ent:	
7 - P		-	Safety glasse				
Skin a	and body protection	:			clothing based or	n chemical	
			resistance da	ta and an asses	sment of the loca	l exposure	
			potential.				
					by using impervi	ous protective	
				es, aprons, bool			
Hygie	ne measures	÷	eye flushing s working place When using c	systems and safe e. do not eat, drink	ly during typical u ety showers close or smoke. should not be allo	e to the	
			workplace.	-			
11			Wash contain	ninated clothing	hoforo ro-uso		

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

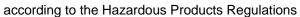
Appearance

: paste





Versio 4.0	n	Revision Date: 09/28/2024		S Number: 833-00022	Date of last issue: 09/30/2023 Date of first issue: 05/02/2016
С	Color		:	white	
0)dor		:	Petroleum	
0	dor Th	reshold	:	No data available)
pl	Н		:	No data available)
Μ	lelting	point/freezing point	:	No data available)
	nitial bo ange	iling point and boiling	:	No data available	
F	lash po	pint	:	Not applicable	
E	vapora	ation rate	:	No data available	9
F	lamma	bility (solid, gas)	:	Not classified as	a flammability hazard
F	lamma	bility (liquids)	:	No data available	
		xplosion limit / Upper pility limit	:	No data available	
		xplosion limit / Lower pility limit	:	No data available	
V	′apor p	ressure	:	No data available)
R	Relative	vapor density	:	No data available)
R	Relative	density	:	No data available	9
D	ensity		:	No data available	9
S	olubilit Wate	y(ies) er solubility	:	No data available)
	artitior	coefficient: n-	:	Not applicable	
		ition temperature	:	No data available	9
D	ecomp	oosition temperature	:	No data available	
V	iscosit/ Visco	y osity, kinematic	:	No data available	9
E	xplosi	ve properties	:	Not explosive	
0	Dxidizin	g properties	:	The substance of	mixture is not classified as oxidizing.
	article Particle	characteristics size	:	No data available	





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SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reac- tions	:	Not classified as a reactivity hazard. Stable under normal conditions. Can react with strong oxidizing agents.
Conditions to avoid Incompatible materials Hazardous decomposition products		None known. Oxidizing agents No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Product:

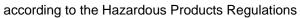
Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

Bismuth	hydroxide	nitrate	oxide:	

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat): > 5.07 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 436 Remarks: Based on data from similar materials
Petrolatum:		
Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

Zinc oxide:





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Acute	oral toxicity	: LD	50 (Rat): > 5,0	000 mg/kg		
Acute inhalation toxicity		Ex Te: As:	LC50 (Rat): > 5.7 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhala- tion toxicity			
Acute	dermal toxicity	Me As:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute derr toxicity			
Benzy	yl alcohol:					
Acute	oral toxicity	: LD	50 (Rat): 1,20	0 mg/kg		
Acute	inhalation toxicity	Ex Te: Me As:		h		
Skin o	corrosion/irritation					
Not cla	assified based on ava	ilable info	mation.			
<u>Comp</u>	oonents:					
	uth hydroxide nitrate					
Specie Metho			 reconstructed human epidermis (RhE) OECD Test Guideline 439 			
Result	t	: No	skin irritation			
Petro	latum:					
Specie Metho Result Rema	bd t	: OE : No	bbit CD Test Guic skin irritation sed on data fr	leline 404 om similar materials		

Zinc oxide:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation

Benzyl alcohol:

Species Method Result	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation



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	us eye damage/eye ir lassified based on avail			
Com	oonents:			
Bism	uth hydroxide nitrate	oxid	e:	
Speci Resu Metho	les It	:	Rabbit No eye irritation OECD Test Guide	eline 405
Petro	latum:			
Speci Resu Metho Rema	lt od	:	Rabbit No eye irritation OECD Test Guide Based on data fro	eline 405 om similar materials
Zinc	oxide:			
Speci Resul Metho	lt	:	Rabbit No eye irritation OECD Test Guide	eline 405
Benz	yl alcohol:			
Speci Resu Metho	les It	:	Rabbit Irritation to eyes, OECD Test Guide	reversing within 21 days eline 405
Resp	iratory or skin sensiti	zatio	'n	
Skin	sensitization			
Mayo	cause an allergic skin re	eactio	on.	
	iratory sensitization			
Not c	lassified based on avail	able	information.	
Com	oonents:			

Bismuth hydroxide nitrate oxide:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Test Type Routes of exposure Species Method Result	:	negative

Petrolatum:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative
Test Type Routes of exposure Species Result Remarks	:	Based on data from similar materials



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Test 1	es of exposure es od	: Maximization : Skin contact : Guinea pig : OECD Test of : negative	
Test	es t	: Skin contact : Humans : positive	r evidence of low to moderate skin sensitization

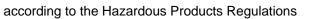
Germ cell mutagenicity

Not classified based on available information.

Components:

Bismuth hydroxide nitrate oxide:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials
	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
Petrolatum:	
Genotoxicity in vitro	: Test Type: Chromosome aberration test in vitro Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative Remarks: Based on data from similar materials
Zinc oxide:	
Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative





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ersion)	Revision Date: 09/28/2024	SDS Number: 656833-00022	Date of last issue: 09/30/2023 Date of first issue: 05/02/2016
			n vitro mammalian cell gene mutation test CD Test Guideline 476 rocal
		Test Type: C Result: equiv	hromosome aberration test in vitro rocal
Geno	toxicity in vivo	cytogenetic a Species: Rat Application F	Route: inhalation (dust/mist/fume) CD Test Guideline 474
		cytogenetic t Species: Rat	Route: inhalation (dust/mist/fume)
		cytogenetic a Species: Mo Application F	use Route: Intraperitoneal injection CD Test Guideline 474
	cell mutagenicity - ssment	: Weight of ev cell mutagen	idence does not support classification as a germ .
Benzy	yl alcohol:		
	toxicity in vitro	: Test Type: B Result: nega	acterial reverse mutation assay (AMES) tive
Geno	toxicity in vivo	cytogenetic a Species: Mo	use Route: Intraperitoneal injection

Carcinogenicity

Not classified based on available information.

Components:

Petrolatum:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	2 Years
Result	:	negative



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Zinc	oxide:			
Spec Appli	ies cation Route sure time It	: : : : : : : : : : : : : : : : : : : :	Mouse Ingestion 1 Years negative Based on data fi	rom similar materials
Benz	yl alcohol:			
	cation Route sure time od	:	Mouse Ingestion 103 weeks OECD Test Guid negative	deline 451
Repr	oductive toxicity			
Not c	classified based on availa	ble	information.	
<u>Com</u>	ponents:			
	outh hydroxide nitrate o	oxid	e:	
Effec	ts on fertility	:		
Effec	ts on fetal development	:	Species: Rat Application Rout	Test Guideline 414
Petro	platum:			
Effec	ts on fertility	:	test Species: Rat Application Rout Result: negative	
Effec	ts on fetal development	:	Species: Rat Application Rout Result: negative	
Zinc	oxide:			
Effec	ts on fertility	:	Test Type: Two- Species: Rat Application Rout Result: negative	
			12/10	



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Eff	ects on fetal development	:	Test Type: Embry Species: Rat Application Route Method: OECD To Result: negative	on data from similar materials o-fetal development : inhalation (dust/mist/fume) est Guideline 414 on data from similar materials
Be	nzyl alcohol:			
	ects on fertility	:	Species: Rat Application Route Result: negative	y/early embryonic development : Ingestion on data from similar materials
Eff	ects on fetal development	:	Test Type: Embry Species: Mouse Application Route Result: negative	o-fetal development : Ingestion
Ca Co	OT-repeated exposure uses damage to organs (C mponents: smuth hydroxide nitrate c			through prolonged or repeated exposure.
Та	rget Organs sessment	:	Central nervous s	ystem o organs through prolonged or repeated
Zir	nc oxide:			
	sessment	:	No significant hea tions of 0.2 mg/l/6	Ith effects observed in animals at concentra- h/d or less.
Re	peated dose toxicity			
	mponents:			
	trolatum:			
Sp NC Ap	ecies DAEL plication Route posure time	: :	Rat 5,000 mg/kg Ingestion 2 y	
Sp	nc oxide: ecies DAEL	:	Rat, male 0.0015 mg/l	



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Applie Expos Methe	cation Route sure time od	 inhalation (dust/mist/fume) 3 Months OECD Test Guideline 413
Speci NOAI Applie	EL cation Route sure time	 Rat 1.072 mg/l inhalation (dust/mist/fume) 28 Days OECD Test Guideline 412
Not c	ration toxicity lassified based on ava rience with human e	
Prod Inges		: Symptoms: The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis., May cause, Neurological disorders, Blood disorders, blood effects, central nervous sys- tem effects, Methaemoglobinemia
Com	ponents:	
Bism Inges	uth hydroxide nitrate tion	 Dxide: Target Organs: Blood Symptoms: Methaemoglobinemia Target Organs: Central nervous system Symptoms: Neurological disorders
	12. ECOLOGICAL IN	ORMATION
_	ponents:	

Components:

Bismuth hydroxide nitrate oxide:

T	oxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 137 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
	oxicity to daphnia and other quatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 137 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
	oxicity to algae/aquatic ants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 137 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201





rsion	Revision Date: 09/28/2024		9S Number: 6833-00022	Date of last issue: 09/30/2023 Date of first issue: 05/02/2016	
			137 mg/l Exposure time: 72	Nater Accommodated Fraction	
Petro	latum:				
Toxicity to fish		:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials		
Toxicity to daphnia and other aquatic invertebrates		:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials		
Toxicity to algae/aquatic plants		:	NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials		
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)		:	Exposure time: 2 Test substance: \	magna (Water flea)): 10 mg/l 1 d Vater Accommodated Fraction on data from similar materials	
Zinc o	oxide:				
Toxici	Toxicity to fish		LC50 : > 0.1 - 1 n Exposure time: 90 Remarks: Based	5	
Toxici plants	ty to algae/aquatic	:	ErC50 (Pseudoki mg/l Exposure time: 72	rchneriella subcapitata (green algae)): 0.136 2 h	
			- 0.1 mg/l Exposure time: 72	rchneriella subcapitata (green algae)): > 0.0 2 h on data from similar materials	
Toxici icity)	ty to fish (Chronic tox-	:	Exposure time: 14	a floridae (flagfish)): > 0.01 - 0.1 mg/l 4 Weeks on data from similar materials	
Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)		:	Exposure time: 7	hnia dubia (water flea)): > 0.01 - 0.1 mg/l d on data from similar materials	



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		alcohol:				
		to fish	:	LC50 (Pimephales promelas (fathead minnow)): 460 mg/l Exposure time: 96 h		
	Toxicity to daphnia and other aquatic invertebrates		:	EC50 (Daphnia magna (Water flea)): 230 mg/l Exposure time: 48 h Method: OECD Test Guideline 202		
	Toxicity to algae/aquatic plants		:	EC50 (Pseudokiro mg/l Exposure time: 72 Method: OECD Te		
				NOEC (Pseudokir mg/l Exposure time: 72 Method: OECD Te		
		v to daphnia and other invertebrates (Chron- ity)	:	NOEC (Daphnia n Exposure time: 21 Method: OECD Te		
	Persist	tence and degradabili	ty			
	Compo	onents:				
	Petrola	atum:				
		radability	:		1 %	
		alcohol:				
		radability	:	Result: Readily bid Biodegradation: 9 Exposure time: 14	2 - 96 %	
-	Bioacc	umulative potential				
	Compo	onents:				
	Zinc o	kide:				
	Bioaccu	umulation	:		nchus mykiss (rainbow trout) actor (BCF): 78 - 2,060	
	Benzyl	alcohol:				
	Partitio octanol	n coefficient: n- /water	:	log Pow: 1.05		

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	lity in soil ata available					
••	Other adverse effects No data available					
SECTION	13. DISPOSAL CON	SIDER	ATIONS			
Disp	osal methods					
Wast	e from residues	:		of waste into sewer. cordance with local regulations.		
Conta	aminated packaging	:				

SECTION 14. TRANSPORT INFORMATION

International Regulations

-		
UNRTDG UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, 2,6-Di-tert-butyl-p-cresol)
Class		9
Packing group	÷	
Labels	÷	9
Environmentally hazardous	:	yes
IATA-DGR		
UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (Zinc oxide, 2,6-Di-tert-butyl-p-cresol)
Class	:	9
Packing group	:	
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passen- ger aircraft)	:	956
Environmentally hazardous	:	yes
IMDG-Code		
UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
		(Zinc oxide, 2,6-Di-tert-butyl-p-cresol)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes



according to the Hazardous Products Regulations

Bismuth Subnitrate Formulation

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	n sport in bulk accordi applicable for product a	•	ARPOL 73/78 and the IBC Code
Don	nestic regulation		
) number per shipping name	N.O.S.	ENTALLY HAZARDOUS SUBSTANCE, SOLID, 2,6-Di-tert-butyl-p-cresol)
Labe ERG	king group	: 9 : III : 9 : 171	le, 2,6-Di-tert-butyl-p-cresol)

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:

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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations				
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)		
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)		
CA BC OEL	:	Canada. British Columbia OEL		
CA QC OEL	:	Québec. Regulation respecting occupational health and safe- ty, Schedule 1, Part 1: Permissible exposure values for air- borne contaminants		
ACGIH / TWA	:	8-hour, time-weighted average		
ACGIH / STEL	:	Short-term exposure limit		
CA AB OEL / TWA	:	8-hour Occupational exposure limit		
CA AB OEL / STEL	:	15-minute occupational exposure limit		
CA BC OEL / TWA	:	8-hour time weighted average		
CA BC OEL / STEL	:	short-term exposure limit		
CA QC OEL / TWAEV	:	Time-weighted average exposure value		
CA QC OEL / STEV	:	Short-term exposure value		



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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 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

Sources of key data used to compile the Material 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/
Revision Date Date format	:	09/28/2024 mm/dd/yyyy

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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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