

Section 1: Identification Product name Produ	Version 2.0	Revision Date: 10.10.2020		S Number: 60471-00003	Date of last issue: 23.03.2020 Date of first issue: 17.10.2019
Manufacturer or supplier's details Company : MSD Address : 33 Whakatiki Street - Private Bag 908 Upper Hutt - New Zealand Telephone : 0800 800 543 Emergency telephone number : 0800 764 766 (0800 POISON) E-mail address : EHSDATASTEWARD@msd.com Recommended use of the chemical and restrictions on use Recommended use : Recommended use : Veterinary product Section 2: Hazard identification Specific target organ toxicity - : Category 1 (Central nervous system) Specific target organ toxicity - : : Category 1 (Central nervous system) repeated exposure : Danger Hazard pictograms : H372 Causes damage to organs (Central nervous system) Signal word : H372 Causes damage to organs (Central nervous system) Precautionary statements : H372 Causes damage to organs (Central nervous system) Precautionary statements : H372 Causes damage to organs (Central nervous system) P260 Do not breathe dust/ fume/ gas/ mist/ vapours, P264 Wash skin thoroughly after handling, P270 Do not eat, drink or smoke when using this process P314 Get medical advice/ attention if you feel unwel <	Section	1: Identification			
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P501 Dispose of contents/ container to an approved				-	cal advice/ attention if you feel unwell.
				-	of contents/ container to an approved waste



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Other hazards which do not result in classification

None known.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Bismuth hydroxide nitrate oxide	1304-85-4	>= 60 -<= 100
White mineral oil (petroleum)	8042-47-5	>= 10 -< 30
Fatty acids, C14-26, aluminum salts	97404-28-9	< 10

Section 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. 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	:	Flush eyes with water as a precaution. 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 delayed	:	Causes damage to organs through prolonged or repeated exposure.
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.

Section 5: Fire-fighting 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	:	Nitrogen oxides (NOx) Metal oxides Carbon oxides
Specific extinguishing meth-	:	Use extinguishing measures that are appropriate to local cir-



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ods Special protective equipment stor firefighters		:	 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. In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. 				
Section 6	6: Accidental release me	easu	res				
tive e	onal precautions, protec- equipment and emer- ey procedures		Follow safe handl	ective equipment. ing advice (see section 7) and personal pro- 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			For large spills, pr ment to keep mate be pumped, store Clean up remainin bent. Local or national r posal of this mate employed in the c mine which regula Sections 13 and 1	absorbent material. ovide dyking or other appropriate contain- erial from spreading. If dyked material can recovered material in appropriate container. og materials from spill with suitable absor- egulations may apply to releases and dis- rial, as well as those materials and items leanup of releases. You will need to deter- tions are applicable. 5 of this SDS provide information regarding tional requirements.			
Section 7	7: Handling and storage						
Tech	inical measures			measures under EXPOSURE			

Local/Total ventilation : Advice on safe handling :	CONTROLS/PERSONAL PROTECTION section. Use only with adequate ventilation. Do not breathe dust, fume, gas, mist, vapours or spray. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as- sessment Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures :	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke.



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	tions for safe storage ials to avoid	The effective oper engineering cont appropriate dego industrial hygiene use of administra : Keep in properly Store in accorda	labelled containers. nce with the particular national regulations. the following product types:

Section 8: Exposure controls/personal protection

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
White mineral oil (petroleum)	8042-47-5	WES-TWA (Mist)	5 mg/m3	NZ OEL
	Further informativapour.	ation: Sampled b	y a method that does	s not collect
		WES-STEL (Mist)	10 mg/m3	NZ OEL
		TWA (Inhal- able particu- late matter)	5 mg/m3	ACGIH
Fatty acids, C14-26, aluminum salts	97404-28-9	TWA (Res- pirable par- ticulate mat- ter)	1 mg/m3 (Aluminium)	ACGIH

Components with workplace control parameters

Engineering measures	:	Use feasible engineering controls to minimize exposure to compound. All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Personal protective equipme	nt	
Respiratory protection Filter type Hand protection	:	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Combined particulates and organic vapour type
Material	:	Chemical-resistant gloves
Eye protection	:	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. Sector 9: Physical and chemical protection i paste Appearance : paste Colour : White to light yellow Odour : No data available Odour Threshold : No data available pH : No data available Melting point/freezing point : No data available Initial boiling point and boiling range : No data available Flash point : No data available Evaporation rate : Not data available Flammability (solid, gas) : No data available Upper explosion limit / Upper : No data available	
Appearance:pasteColour:White to light yellowOdour:No data availableOdour Threshold:No data availablepH:No data availableMelting point/freezing point:No data availableInitial boiling point and boiling range:No data availableFlash point:No data availableEvaporation rate:No data availableFlammability (solid, gas):No data availableUpper explosion limit / Upper:No data available	
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Melting point/freezing point : No data available Initial boiling point and boiling : No data available range Flash point : No data available Evaporation rate : Not applicable Flammability (solid, gas) : No data available Upper explosion limit / Upper : No data available	
Initial boiling point and boiling range : No data available Flash point : No data available Evaporation rate : Not applicable Flammability (solid, gas) : No data available Upper explosion limit / Upper : No data available	
range Flash point : No data available Evaporation rate : Not applicable Flammability (solid, gas) : No data available Upper explosion limit / Upper : No data available	
Evaporation rate:Not applicableFlammability (solid, gas):No data availableUpper explosion limit / Upper:No data available	
Flammability (solid, gas) : No data available Upper explosion limit / Upper : No data available	
Upper explosion limit / Upper : No data available	
harmonity mint	
Lower explosion limit / Lower : No data available flammability limit	
Vapour pressure : Not applicable	
Relative vapour density : Not applicable	
Relative density : No data available	
Density : No data available	
Solubility(ies) Water solubility : No data available	
Partition coefficient: n- : Not applicable	
octanol/water Auto-ignition temperature : No data available	
Decomposition temperature : No data available	
Viscosity Viscosity, kinematic : Not applicable	
Explosive properties : Not explosive	



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Oxidi	zing properties	: The substanc	e or mixture is not classified as oxidizing.
Molecular weight		: No data availa	able
Particle size		: No data availa	able

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

Exposure routes	: Skin conta	act
	Ingestion	
	Eye conta	ct

Acute toxicity

Not classified based on available information.

Components:

-			
	Bismuth hydroxide nitrate oxi	ide	2:
	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
ĺ	White mineral oil (petroleum):		
	Acute oral toxicity :		LD50 (Rat): > 5,000 mg/kg
	Acute inhalation toxicity :	:	LC50 (Rat): > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhala- tion toxicity
	Acute dermal toxicity :	:	LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity



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Fatty	acids, C14-26, alumin	num	salts:	
Acute	e oral toxicity	:	Method: OECD T	e): > 2,000 mg/kg Test Guideline 423 on data from similar materials
Acute	e inhalation toxicity	:		h
Skin	corrosion/irritation			
	lassified based on avail	able	information.	
11	ponents:			
	outh hydroxide nitrate	oxid		
Spec Meth		:	reconstructed hui OECD Test Guide	man epidermis (RhE) eline 439
Resu	lt	:	No skin irritation	
White	e mineral oil (petroleu	m):		
Spec			Rabbit	
Resu		:	No skin irritation	
Fatty	acids, C14-26, alumin	num	salts:	
Spec		:		man epidermis (RhE)
Meth		:	OECD Test Guid	
Rema	arks	:	Based on data fro	om similar materials
Spec	ies	:	reconstructed hui	man epidermis (RhE)
Meth		:	OECD Test Guid	
Rema	arks	:	Based on data fro	om similar materials
Resu	lt	:	No skin irritation	
Not c	ous eye damage/eye in lassified based on avail			
11	ponents:			
8.8.	uth hydroxide nitrate	oxid		
Spec Resu		÷	Rabbit No eye irritation	
Meth		:	OECD Test Guid	eline 405
White	e mineral oil (petroleu	m):		
Spec		:	Rabbit	
Resu		:	No eye irritation	



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Fatty acids, C14-26, aluminum salts:

Species Result Method Remarks	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405
Remarks	: Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Bismuth hydroxide nitrate oxide:

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

White mineral oil (petroleum):

Test Type Exposure routes Species Result	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Fatty acids, C14-26, aluminum salts:

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

Chronic toxicity

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



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		Method: OECD Result: negative	Test Guideline 476 e
			omosome aberration test in vitro Test Guideline 473 e
White	e mineral oil (petrole	um):	
	otoxicity in vitro	-	tro mammalian cell gene mutation test e
Gend	otoxicity in vivo	cytogenetic ass Species: Mouse Application Rou Method: OECD Result: negative	e ite: Intraperitoneal injection Test Guideline 474
Fatty	v acids, C14-26, alum	inum salts:	
Genc	otoxicity in vitro	Method: OECD Result: negative	terial reverse mutation assay (AMES) Test Guideline 471 e d on data from similar materials
		Method: OECD Result: negative	tro mammalian cell gene mutation test Test Guideline 476 e d on data from similar materials
	inogenicity classified based on ava	ilable information.	
<u>Com</u>	ponents:		
Whit	e mineral oil (petrole	um):	
Spec	ies	: Rat	
	cation Route sure time Ilt	: Ingestion : 24 Months : negative	
Repr	oductive toxicity		

Reproductive toxicity

Not classified based on available information.

Components:

Bismuth hydroxide nitrate oxide:

Effects on fertility	: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Result: negative
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Effects	Effects on foetal develop- : ment		Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative	
White	mineral oil (petroleu	m):		
Effects	s on fertility		Test Type: One-g Species: Rat Application Route Result: negative	eneration reproduction toxicity study : Skin contact
Effects	s on foetal develop-		Test Type: Embry Species: Rat Application Route Result: negative	ro-foetal development : Ingestion
Fatty	acids, C14-26, alumin	um s	alts:	
Effects	s on fertility		reproduction/deve Species: Rat Application Route Method: OECD T Result: negative	ined repeated dose toxicity study with the elopmental toxicity screening test : Ingestion est Guideline 422 on data from similar materials
Effects	s on foetal develop-		test Species: Rat Application Route Method: OECD T Result: negative	duction/Developmental toxicity screening : Ingestion est Guideline 414 on data from similar materials

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Causes damage to organs (Central nervous system) through prolonged or repeated exposure.

Components:

Bismuth hydroxide nitrate oxide:							
Target Organs Assessment		Central nervous system Causes damage to organs through prolonged or repeated exposure.					



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Repe	ated dose toxicity		
Com	ponents:		
White	e mineral oil (petrole	um):	
Expo Spec LOAE	EL cation Route sure time ies	: Rat : 160 mg/kg : Ingestion : 90 Days : Rat : >= 1 mg/l : inhalation	-
	sure time	: 4 Weeks	st Guideline 412
Fatty	acids, C14-26, alum	inum salts:	
Speci Appli	ies cation Route sure time	: Rat : >= 1000 r : Ingestion : 42 Days	ng/kg data from similar materials
-	ration toxicity		
	lassified based on ava		٦.
Expe	rience with human e	xposure	
Com	ponents:		
Bism	uth hydroxide nitrat	e oxide:	
Inges	ition	Symptom Target Or	gans: Blood s: Methaemoglobinemia gans: Central nervous system s: Neurological disorders

Ecotoxicity

Components:

	Bismuth hydroxide nitrate oxide:							
•	Toxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 137 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203					
	Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 137 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202					



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	Toxicity to algae/aquatic : plants		mg/l Exposure time: 7 Test substance:	chneriella subcapitata (green algae)): > 137 2 h Water Accommodated Fraction Fest Guideline 201
			137 mg/l Exposure time: 7 Test substance:	kirchneriella subcapitata (green algae)): > 2 h Water Accommodated Fraction Fest Guideline 201
II White	e mineral oil (petroleum	ı):		
11.	ity to fish	:	Exposure time: 9	chus mykiss (rainbow trout)): > 100 mg/l)6 h Fest Guideline 203
	ity to daphnia and other ic invertebrates	:	Exposure time: 4	nagna (Water flea)): > 100 mg/l 8 h Fest Guideline 202
Toxic plants	ity to algae/aquatic	:	mg/l Exposure time: 7	irchneriella subcapitata (green algae)): 100 '2 h Fest Guideline 201
Toxic icity)	ity to fish (Chronic tox-	:	NOEC (Oncorhy Exposure time: 2	nchus mykiss (rainbow trout)): 1,000 mg/l 28 d
	ity to daphnia and other ic invertebrates (Chron- icity)	:	NOEC (Daphnia Exposure time: 2	magna (Water flea)): 1,000 mg/l 1 d
Persi	stence and degradabili	ity		
<u>Com</u>	oonents:			
White	e mineral oil (petroleum	ı):		
Biode	gradability	:	Result: Not readi Biodegradation: Exposure time: 2	
Fatty	acids, C14-26, aluminu	ım	salts:	
- UL	gradability	:	Result: Readily b Biodegradation: Exposure time: 2 Method: OECD 1	81.2 %



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Bio	Bioaccumulative potential								
Components: Fatty acids, C14-26, aluminum salts: Partition coefficient: n- : log Pow: > 7 octanol/water Remarks: Calculation									
Mobility in soil No data available									
Oth No									
Section	Section 13: Disposal considerations								
Dis	posal methods								
	ste from residues ntaminated packaging	:	Empty containers dling site for recy	ordance with local regulations. s should be taken to an approved waste han- cling or disposal. pecified: Dispose of as unused product.					

Section 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 Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

NZS 5433 Not regulated as a dangerous good

Section 15: Regulatory information

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

HSNO Approval Number

HSR100758 Veterinary Medicines Non dispersive Closed System Application Group Standard 2020



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2.0	10.10.2020	5060471-00003	Date of first issue: 17.10.2019

HSW Controls

Certified handler certificate not required. Tracking hazardous substance not required. Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

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

Section 16: Other information

Further information

Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
compile the Safety Data		eChem Portal search results and European Chemicals Agen-
Sheet		cy, http://echa.europa.eu/

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

Date format	:	dd.mm.yyyy
Full text of other abbreviatio	ns	
ACGIH NZ OEL	:	USA. ACGIH Threshold Limit Values (TLV) New Zealand. Workplace Exposure Standards for Atmospher- ic Contaminants
ACGIH / TWA NZ OEL / WES-TWA NZ OEL / WES-STEL	:	8-hour, time-weighted average Workplace Exposure Standard - Time Weighted average Workplace Exposure Standard - Short-Term Exposure Limit

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



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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; 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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