WASHINGTON MILLS

Printing date: 29.10.2014

Safety data sheet According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and US GHS

Revision: 27.06.2018

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	Product Identifier GHS Product Identifier	White Spinel, SP-27 White Spinel, SP-27
	Chemical Name	Magnesium Aluminum Oxide
	Trade Name CAS No. EINECS No. REACH Registration No.	See Product Identifier 12068-51-8 235-100-5 Not available
1.2		of The Substance Or Mixture And Uses Advised Against Product Component
1.3	Details Of The Supplier Of Company Identification Address	The Safety Data Sheet Washington Mills Electro Minerals Corp. 1801 Buffalo Avenue Niagara Falls, NY 14302
	· · · /	(716) 278-6600 info@washingtonmills.com
1.4	Emergency Telephone Nu (800)255-3924 (USA/Canac	la), 813-248-0585 (International)

SECTION 2: HAZARDS IDENTIFICATION

2.1	Classification O	f The Substance	e Or Mixture		
2.1.1	Classification according to Regulation (EC) No. 1272/2008				
	The product is no	ot classified as ha	azardous according	to GHS regul	ations.
	The product is no	ot classified as ha	azardous according	to the CLP re	gulation.
2.2	Label Elements		C C		
2.2.1	Label Elements	According to R	egulation (EC) No.	1272/2008 (CLP)
	The product is no	ot classified as ha	azardous according	to OSHA GH	S regulations within the United States.
			sification according		
	Hazard	Not Regulated		Signal	Not Regulated
	Pictogram(s)			Word(s)	
	Hazard-determin	ning component	ts of labelling: Nor	ne.	
	Hazard	Not Regulated			
	Statement(s)	-			
	Hazard descript	ion:			
	WHMIS-	Not hazardous	under WHMIS.		
	symbols:				
	NFPA ratings		Health = 0		
	(scale 0 - 4)		Fire = 0		
			Reactivity = 0		
	HMIS-ratings	HEALTH 0	Health $= 0$		
	(scale 0 - 4)	FIRE 0	Fire = 0		
	(,	REACTIVITY 0	Reactivity = 0		
	HMIS Long		,		
	Term Health	Substance is no	at listed		
	Hazard	Substance is no	Ji listeu.		
	Substances				
2.3	Other Hazards				
2.0	Results of PBT	PBT: Not applic	cable		
	and vPvB				
	assessment	vPvB: Not appl	icapie.		
	assessment				

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances **CAS No. Description** 12068-51-8 dialuminium magnesium tetraoxide Identification number(s) EC number: 235-100-5

SECTION 4: FIRST AID MEASURES

4.1	Description of First Aid Measures				
	General Information:	No special measures required.			
	After Inhalation:	Supply fresh air; consult doctor in case of complaints.			
	After Skin Contact:	Brush off loose particles from skin. Wash with soap and water. If skin irritation is experienced, consult a doctor.			
	After Eye Contact:	Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.			
	After Swallowing:	Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.			
4.2	Most Important Symptoms And Effects, Both Acute And Delayed	Slight irritant effect on eyes.			
	Hazards	No further relevant information available.			
4.3	Indication Of The Immediate Medical Attention And Special Treatment Needed	No further relevant information available.			

SECTION 5: FIRE-FIGHTING MEASURES

5.1	Extinguishing Media	
	Suitable Extinguishing Media	Use fire extinguishing methods suitable to surrounding conditions.
	Unsuitable Extinguishing Media	None.
5.2	Special Hazards Arising From The Substance Or Mixture	No further relevant information available.
5.3	Advice for Fire-Fighters	Wear self-contained respiratory protective device. Wear fully protective suit.
	Additional Information	No further relevant information available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal Precautions, Protective Equipment And Emergency Procedures	Use respiratory protective device against the effects of fumes/dust/aerosol. Avoid formation of dust. Ensure adequate ventilation.
6.2 6.3	Environmental Precautions Methods And Material For Containment And Cleaning Up	Do not allow to enter sewers / surface or ground water. Pick up mechanically. Ensure adequate ventilation. Dispose contaminated material as waste according to item 13.
6.4	Reference To Other Sections	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.



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SECTION 7: HANDLING AND STORAGE

	Precautions For Safe	Use only in well ventilated. Prevent formation of dust. Any unavoidable deposit of
7.1	Handling	dust must be regularly removed. Do not dry clean covered objects and floors. Wash thoroughly with plenty of water.
	Information About	No special measures required.
	Fire – and explosion protection	
7.2	Conditions For Safe S	torage, Including Any Incompatibilities:
	Requirements to be	Store in a cool location. Storage area should be dry and well-ventilated. Store only in
	Met by Storerooms and Receptacles:	the original receptacle.
	Information About Storage in One	Store away from oxidizing agents. Store away from foodstuffs. Store away from oxidizers, strong acids, strong bases.
	Common Storage Facility:	
	Further information	Keep container tightly sealed.
	about storage conditions:	
7.3	Specific End Use(s)	No further relevant information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Addition	al information ab	out design	of technical facili	ties: No further data; see item 7.		
3.1 Co	ontrol Parameters					
	ents with limit valu	ues that rec	uire monitoring a	at the workplace:		
dialuminium magnesium 12068 51 8 PEL (USA) Long-term value: 15 (total), 5 (resp.) mg/m ³						
tetraoxic	le s No further releva		TLV (USA)	Long-term value: 10 mg/m ³		
	s No further relevant					
				ng were used as basis.		
3.2	Exposure Contro		9	•		
3.2.2	Personal Protec	tive Equipr	nent:			
	General protecti	ive and hyg	ienic measures:			
	General			easures are to be adhered to when handling chemicals.		
	protective and			led and contaminated clothing. Keep away from		
	hygienic		foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Do not inhale dust / smoke / mist. Avoid contact with the eyes and skin.			
	measures:					
	Respiratory		Not necessary if room is well-ventilated. Use suitable respiratory protective device			
	Protection		when high concentrations are present. For spills, respiratory protection may be advisable.			
8	Eye Protection	Wear sa	fety glasses.			
	Protection of Hands	Wear pr	Wear protective gloves.			
	Body Protection	Protectiv	e work clothing.			
	Limitation and	No spec	ial requirements.			
	supervision of					
	exposure into th	ne				
	environment					
	Risk Manageme	nt No spec	ial requirements.			
	Measures					

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Granulate	Color	White
Odor	Odourless	Odor Threshold (ppm)	Not available
Melting Point (°C) / Freezing Point (°C)	3812 ° F / 2100 °C	Boiling Point/Boiling Range (°C)	Not available
Flash Point (°C)	No Data	Explosive Limit Ranges	Not available
Auto Ignition Temperature (°C)	Not available	Decomposition Temperature (°C)	Not available
Explosive Properties	None	Oxidizing Properties	Not available
Flammability (Solid, Gas)	Not available	Ph (Value)	Not available
Evaporation Rate	N/A	Vapor Pressure (mm Hg)	Not available
Vapor Density (Air=1)	N/A	Density (g/ml)	3,6 g/cm ³
Solubility (Water)	Insoluble	Solubility (Other)	Not available
Partition Coefficient (N- Octanol/Water)	Not available	Viscosity (mPa.s)	Not available
Other Information	Volatile Organic Che	mical (VOC) Content – Not Available.	

SECTION 10: STABILITY AND REACTIVITY

10.1 10.2	Reactivity Chemical Stability	Stable under normal temperatures and pressures.
	Thermal Decomposition / conditions to be avoided:	No decomposition if used according to specifications.
10.3	Possibility of Hazardous Reactions	Reacts with strong acids and alkali. Reacts with strong oxidising agents.
10.4	Conditions To Avoid	No further relevant information available.
10.5	Incompatible Materials	No further relevant information available.
10.6	Hazardous Decomposition Product(s)	No dangerous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	Information on Toxicological Acute toxicity:	Effects
	Primary Irritant Effect:	
	On the skin:	Slight irritant effect on skin and mucous membranes.
	On the eye:	Slight irritant effect on eyes.
	Sensitisation:	No sensitizing effects known.
	Additional toxicological	When used and handled according to specifications, the
	information:	product does not have any harmful effects to our experience
		and the information provided to us. The substance is not
		subject to classification according to the latest version of the
		EU lists.

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	
	Aquatic toxicity:	No further relevant information available.
12.2	Persistence and Degradability	No further relevant information available.
12.3	Bioaccumulative Potential	The product is not expected to bioaccumulate in soil or water
		organisms.
12.4	Mobility in Soil	No further relevant information available.
	Additional ecological information:	
	General notes:	Not known to be hazardous to water.



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12.5 Results of PBT and vPvB

Assessment

Other Adverse Effects 12.6

PBT: Not applicable. vPvB: Not applicable. No further relevant information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste Treatment Methods	
	Recommendation	Smaller quantities can be disposed of with household waste. Contact waste
		processors for recycling information. The user of this material has the
		responsibility to dispose of unused material, residues and containers in
		compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous
		wastes. Residual materials should be treated as hazardous.
	Uncleaned Packaging:	
	Recommendation:	Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

Land Transport (ADR/RID)	(c)(d)	Land Transport (Within USA) (b)(d)	
UN Number	None	UN Number	None
Proper Shipping Name	Not classified as dangerous for transport.	Proper Shipping Name	Not classified as dangerous for transport.
Transport Hazard Class(es)	None	Transport Hazard Class(es)	None
Packing Group	None	Packing Group	None
Hazard Label(s)	None	Hazard Label(s)	None
Environmental Hazards	None	Environmental Hazards	None
Special Precautions For User	None	Special Precautions For User	None
Sea Transport (IMDG) (c)		Air Transport (ICAO/IATA) (c) (d)	
UN Number	None	UN Number	None
Proper Shipping Name	Not classified as dangerous for transport.	Proper Shipping Name	Not classified as dangerous for transport.
Transport Hazard Class(es)	None	Transport Hazard Class(es)	None
Packing Group	None	Packing Group	None
Marine Pollutant	None	Marine Pollutant	None
Special Precautions For User	None	Special Precautions For User	None

(c)- Consult with transport provider.

(d)– Check relevant regulations for Special Provisions.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

5.1	Safety, Health And Environmental Regulations/Legislation Specific For The Substance Or Mixture			
	USA SARA			
	SARA 313 (Specific toxic chemical listings)	Substance is not listed.		
	TSCA (Toxic Substance Control Act)	Substance is listed.		
	Proposition 65 (California):			
	Chemicals known to cause cancer:	Substance is not listed.		

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Chemicals known to cause reproductive toxicity for females:	Substance is not listed.	
Chemicals known to cause reproductive toxicity for males:	Substance is not listed.	
Chemicals known to cause developmental toxicity:	Substance is not listed.	
Carcinogenic Categories		
EPA (Environmental Protection Agency)	Substance is not listed.	
IARC (International Agency for Research on Cancer)	Substance is not listed.	
TLV (Threshold Limit Value established by ACGIH)	Substance is not listed.	
MAK (German Maximum Workplace Concentration)	Substance is not listed.	
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed.	
Canada		
Canadian Domestic Substances List (DSL)	Substance is not listed.	
Canadian Ingredient Disclosure list (limit 0.1%)	Substance is not listed.	
Canada Ingredient Disclosure list (limit 1%)	Substance is not listed.	
Other regulations, limitations and prohibitive regulations		
Substances of very high concern (SVHC) according to REACH, Article 57	Substance is not listed.	
Chemical Safety Assessment	A Chemical Safety Assessment has not been carried out.	
	toxicity for females: Chemicals known to cause reproductive toxicity for males: Chemicals known to cause developmental toxicity: Carcinogenic Categories EPA (Environmental Protection Agency) IARC (International Agency for Research on Cancer) TLV (Threshold Limit Value established by ACGIH) MAK (German Maximum Workplace Concentration) NIOSH-Ca (National Institute for Occupational Safety and Health) Canada Canadian Domestic Substances List (DSL) Canadian Ingredient Disclosure list (limit 0.1%) Canada Ingredient Disclosure list (limit 1%) Other regulations, limitations and prohibitive Substances of very high concern (SVHC) according to REACH, Article 57	

SECTION 16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Additional information:

- The accumulation of airborne dust particles may lead to health and safety risks in some cases. The use of good industrial practices will mitigate this risk.
- The health risks from inhalation of dust particles vary; this is due to particle concentration, exposure length, number of exposures and type of particles inhaled. Please read Section 2,4,6,7 and 8 of the SDS to understand these potential risks. Wear personal protective equipment and follow storage and handling procedures to maintain a safe workplace.
- In rare instances, combustible dusts may represent a potential explosion hazard when airborne. This hazard is often
 associated with organic dust such as foodstuffs and coal, but may also occur with mineral products. While the majority
 of our products would be considered non-combustible, the overall airborne environment should be considered when
 determining the need for mitigation from the potential hazard. Consult recognized experts when necessary in order to
 determine any possible hazard.

Please read the SDS for specific information concerning these hazards, and contact us with any further questions. We appreciate your continued business.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)



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DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH)

Sources

SDS Prepared by: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com