

Safety data sheet

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

Printing date: 03.07.2018

Revision: 03.07.2018

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

1.1	Product Identifier	DURALUM HFST II
	GHS Product Identifier	DURALUM HFST II
	Chemical Name	Mixture (Brown Aluminum Oxide)
	Trade Name	See Product Identifier
	CAS No.	Mixture
	EINECS No.	Mixture
	REACH Registration No.	Consult the supplier.
1.2	Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against	
	Identified Use(s)	Consult the supplier.
	Uses Advised Against	Users are recommended to seek further advice.
1.3	Details Of The Supplier Of The Safety Data Sheet	
	Company Identification	Washington Mills
	Address	1801 Buffalo Avenue Niagara Falls, NY 14302
	Telephone	1-800-828-1666
	E-Mail (Competent Person)	info@washingtomills.com
	REACH Registration Company Information	
	Company Identification	WASHINGTON MILLS ELECTRO MINERALS LTD.
	Address	MOSLEY ROAD, TRAFFORD PARK
	Postal Code/Location	MANCHESTER M17 1NR, UNITED KINGDOM
	Telephone	0044 (0)161 848 0271
	Fax	0044 (0)161 872 2974
	Further information obtained from:	
	Telephone	+ 0044 (0)161 873 5512
	E-Mail (expert)	clive.wood@washingtomills.co.uk
1.4	Emergency Telephone Number – ChemTel	
		(800)255-3924 (USA/Canada), 813-248-0585 (International)

SECTION 2: HAZARDS IDENTIFICATION

2.1	Classification Of The Substance Or Mixture		
2.1.1	Classification according to Regulation (EC) No. 1272/2008 (CLP)		
	Hazard Pictogram(s)		GHS08 Health hazard
	Carc. 1Ai H350i: May cause cancer. Route of exposure: Inhalation.		
	Classification according to the OSHA GHS Hazard Communication Standard (29CFR1910.1200)		
	Hazard Pictogram(s)		GHS08 Health Hazard
	Carc. 1A H350: May cause cancer by inhalation.		
	Additional information:		
	There are no other hazards not otherwise classified that have been identified.		
	0% of the mixture consists of component(s) of unknown toxicity.		
2.2	Label Elements		
2.2.1	Label Elements According to Regulation (EC) No. 1272/2008 (CLP)		
	Hazard Pictogram(s)		GHS08
		Signal Word(s)	DANGER
	Hazard Statement(s)	H350i: May cause cancer by inhalation.	
	Precautionary Statement(s)	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves/protective clothing/eye protection/face protection. P308+P313: If exposed or concerned: Get medical advice/attention. P405: Store locked up.	

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P501a: Dispose of contents/container in accordance with local/regional/national/international regulation.

Hazard-determining components of labelling: Quartz (SiO₂)

Label Elements according to the OSHA GHS Hazard Communication Standard (29CFR1910.1200)

Hazard Pictogram(s)  GHS08 **Signal Word(s)** **DANGER**

Hazard Statement(s) H350: May cause cancer. Route of exposure: Inhalation.

Precautionary Statement(s) P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313: If exposed or concerned: Get medical advice/attention.
P405: Store locked up.
P501a: Dispose of contents/container in accordance with local/regional/national/international regulation.

Hazard description:

NFPA ratings (scale 0 - 4)  Health = 1
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)  Health = *1
Fire = 0
Reactivity = 0

HMIS Long Term Health Hazard 14808-60-7 Quartz (SiO₂)

Substances

Other Hazards

Results of PBT and vPvB assessment **PBT:** Not applicable.
vPvB: Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Aluminum Oxide	>90	1344-28-1	215-691-6	01-2119529248-35-XXXX	None	Substance with a Community workplace exposure limit
Quartz (SiO ₂)	<5	14808-60-7	238-878-4	NA		Substance with a Community workplace exposure limit
Titanium Dioxide	<5	13463-67-7	236-675-5	01-2119489379-17-XXXX	None	Substance with a Community workplace exposure limit
Calcium Oxide	<1	1305-78-8	215-138-9	01-2119862019-36-XXX		Eye Dam. 1, H318
						Skin Irrit. 2, H315; STOT SE 3, H335
Magnesium Oxide	<1	1309-48-4	215-171-9	NA	None	Substance with a Community workplace exposure limit
Zirconium Oxide	<1	1314-23-4	215-227-2	01-2119486976-14-XXXX	None	Substance with a Community workplace exposure limit

3.3 Additional Information: The IARC listed titanium dioxide as pertaining to Group 2B: "possible carcinogenic to humans" based upon animal trials. According to the Titanium Dioxide Manufacturers Association and the Titanium Dioxide Stewardship Council, there is no evidence that titanium dioxide itself has toxic properties that would lead to cancer, nor that it presents a carcinogenic risk to humans at exposures experience in the workplace.

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SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures	
General Information:	Take affected persons out into the fresh air.
After Inhalation:	Provide oxygen treatment if affected person has difficulty breathing. Supply fresh air; consult doctor in case of complaints.
After Skin Contact:	Brush off loose particles from skin. If skin irritation is experienced, consult a doctor. Wash with soap and water.
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	Coughing, breathing difficulty.
Hazards	May cause cancer. Route of exposure: Inhalative. Route of exposure: Inhalative.
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	Ensure adequate ventilation. Avoid formation of dust. Use respiratory protective device against the effects of dust. Wear protective equipment. Keep unprotected persons away.
6.2 Environmental Precautions	Damp down dust with water spray.
6.3 Methods And Material For Containment And Cleaning Up	Pick up mechanically. 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.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions For Safe Handling	Prevent formation of dust. Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water. Any unavoidable deposit of dust must be regularly removed. Use only in well ventilated areas.
Information About Fire – and explosion protection	No special measures required.

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7.2	Conditions For Safe Storage, Including Any Incompatibilities: Requirements to be Met by Storerooms and Receptacles: Information About Storage in One Common Storage Facility:	No special requirements. Store away from oxidizing agents. Store away from foodstuffs.
	Further information about storage conditions:	None.
7.3	Specific End Use(s)	No further relevant information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control Parameters

Ingredients with limit values that require monitoring at the workplace:

Ingredient	Product Code	Limit Value	Notes
Aluminum Oxide	1344-28-1	EL (Canada)	Long-term value: 1,0 mg/m ³ respirable, as Al
		EV (Canada)	Long-term value: 10 mg/m ³ total dust
		WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
		OEL (Ireland)	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable dust
		PEL (USA)	Long-term value: 15*, 5** mg/m ³ *Total dust; ** Respirable fraction
		REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
		TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
Quartz (SiO ₂)	60676-86-0	BOELV (EU)	Long-term value: 0,1* mg/m ³ *respirable fraction
		EL (Canada)	Long-term value: 0,025 mg/m ³ ACGIH A2; IARC 1
		EV (Canada)	Long-term value: 0,10* mg/m ³ *respirable fraction
		WEL (Great Britain)	Long-term value: 0,1 mg/m ³ respirable dust, averaged over 8 hours
		OEL (Ireland)	Long-term value: 0,1 mg/m ³
		PEL (USA)	Long-term value: 0,05* mg/m ³ *resp. dust; 30mg/m ³ /%SiO ₂ +2
		REL (USA)	Long-term value: 0,05* mg/m ³ *respirable dust; See Pocket Guide App. A
Titanium Dioxide	13463-67-7	EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust;**respirable fraction; IARC 2B
		EV (Canada)	Long-term value: 10 mg/m ³ total dust
		WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable
		OEL (Ireland)	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable dust
		PEL (USA)	Long-term value: 15* mg/m ³ *total dust
		REL (USA)	See Pocket Guide App. A
		TLV (USA)	Long-term value: 10 mg/m ³
Calcium Oxide	1305-78-8	IOELV (EU)	Short-term value: 4 mg/m ³

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			Long-term value: 1 mg/m ³ Respirable fraction
		EL (Canada)	Long-term value: 2 mg/m ³
		EV(Canada)	Long-term value: 2 mg/m ³
		WEL (Great Britain)	Long-term value: 2 mg/m ³
		OEL (Ireland)	Long-term value: 2 mg/m ³
		PEL (USA)	Long-term value: 5 mg/m ³
		REL (USA)	Long-term value: 2 mg/m ³
		TLV(USA)	Long-term value: 2 mg/m ³
Magnesium Oxide	1309-48-4	EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 10* 3** mg/m ³ *inhalable fume; **respirable dust and fume
		EV (Canada)	Long-term value: 10 mg/m ³ inhalable
		WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ (as Mg) *inhalable dust **fume and respirable dust
		OEL (Ireland)	Short-term value: 10** mg/m ³ Long-term value: 4* 5** 10*** mg/m ³ *respirable dust **fume ***total inhalable dust
		PEL (USA)	Long-term value: 15* mg/m ³ fume; *total particulate
		TLV (USA)	Long-term value: 10* mg/m ³ *as inhalable fraction
Zirconium Oxide	1314-23-4	EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
		WEL (Great Britain)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
		OEL (Ireland)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
		PEL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
		REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
		TLV (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
		EL (Canada)	Short-term value: 10** mg/m ³ Long-term value: 5* 10*** 3**** mg/m ³ *dust & fume ** fume; Rouge: ***total dust ****resp.
		EV (Canada)	Long-term value: 5* 10** mg/m ³ *respirable, including Rouge; **total dust

Additional information: The lists valid during the making were used as basis.

8.2 Exposure Controls

Personal protective equipment:

General protective and hygienic measures:

8.2	Exposure Controls	
8.2.2	Personal Protective Equipment:	
	General protective and hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Avoid contact with the eyes. Do not inhale dust / smoke / mist.
	Respiratory Protection	Wear appropriate NIOSH or EU approved respirator when ventilation is inadequate and occupational exposure limits are exceeded.

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	Eye Protection	Wear safety glasses.
	Protection of Hands	Wear protective gloves.
	Body Protection	Not required under normal conditions of use.
	Limitation and supervision of exposure into the environment	No further relevant information available.
	Risk Management Measures	No further relevant information available. See Section 7 for additional information.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information On Basic Physical And Chemical Properties			
Appearance	Solid granular product	Color	Brown / Grey
Odor	Odorless	Odor Threshold (ppm)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available	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)	4892 ° F / 2700 ° C
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)	Not available
Solubility (Water)	Insoluble	Solubility (Other)	Not available
Partition Coefficient (N-Octanol/Water)	Not available	Viscosity (mPa.s)	Not available
9.2 Other Information	Volatile Organic Chemical (VOC) Content – Not Available.		

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	
10.2 Chemical Stability	
Thermal Decomposition / conditions to be avoided:	No decomposition if used according to specifications.
10.3 Possibility of Hazardous Reactions	As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
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)	Toxic metal oxide smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects	
LD/LC50 values relevant for classification:	
None.	
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.

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Additional toxicological information:	No further relevant information available.
CMR effects (carcinogenicity, mutagenicity, and toxicity for reproduction):	Carcinogen Category 1A

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and Degradability	Inorganic product, is not eliminable from water by means of biological cleaning processes.
12.3 Bioaccumulative Potential	Does not accumulate in organisms.
12.4 Mobility in Soil	No further relevant information available.
Additional ecological information:	
General notes:	Generally not hazardous for water. Due to consistence and the low water solubility of the product a bioavailability is not probable. Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage of the environment is unlikely.
12.5 Results of PBT and vPvB Assessment	PBT: Not applicable. vPvB: Not applicable.
12.6 Other Adverse Effects	No further relevant information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods Recommendation	Contact manufacturer for recycling information. 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:	Packaging may be reused or recycled after cleaning. 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

(b)- ORM-D may be applicable within the USA for package sizes less than 30kg.

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(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

15.1 Safety, Health And Environmental Regulations/Legislation Specific For The Substance Or Mixture

USA

SARA

Section 355 (extremely hazardous substances) None of the ingredients are listed.

SARA 313 (Specific toxic chemical listings) 1344-28-1 aluminum oxide

TSCA (Toxic Substance Control Act) All ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer: 14808-60-7 Quartz (SiO₂)
13463-67-7 titanium dioxide

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Carcinogenic Categories

EPA (Environmental Protection Agency) None of the ingredients are listed.

IARC (International Agency for Research on Cancer) 14808-60-7 Quartz (SiO₂) 1
13463-67-7 titanium dioxide 2B

Canada

Canadian Domestic Substances List (DSL) All ingredients are listed.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57 None of the ingredients are listed.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

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:

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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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstract Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com