

According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), Printing date: 11.02.2015 Revision: 11.02.2015 and US GHS

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

Product Identifier Duramedia 120, 120C, 140, HDA, XM, XA **GHS Product Identifier** Duramedia 120, 120C, 140, HDA, XM, XA

Chemical Name Fired Ceramic Mass Finishing Media

Trade Name See Product Identifier

CAS No. Not available **EINECS No.** Not available **REACH Registration No.** Not available

1.2 Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against

Application of the Preparation of ceramic parts and coatings

substance / the mixture

1.3

Details Of The Supplier Of The Safety Data Sheet

Company Identification Washington Mills Electro Minerals Corp.

1801 Buffalo Avenue Address

Niagara Falls, NY 14302 Telephone (716) 278-6600

E-Mail (Competent Person) info@washingtonmills.com

Emergency Telephone Number – ChemTel 1.4

(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)

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

The product is not classified as hazardous according to the CLP regulation.

2.1.2 Classification according to Directive 67/548/EEC & Directive 1999/45/EC - Not applicable.

Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 **Label Elements**

2.2.1 Label Elements According to Regulation (EC) No. 1272/2008 (CLP)

This product does not have a classification according to the CLP regulation.

The product is not classified as hazardous according to OSHA GHS regulations within the United States.

Word(s)

Hazard Not Regulated Signal Not Regulated

Pictogram(s)

Hazard Not Regulated

Statement(s)

Additional Safety data sheet available on request.

information

Hazard description:

WHMIS-Not hazardous under WHMIS.

symbols: NFPA ratings

(scale 0 - 4)

Health = 1Fire = 0Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *0Fire = 0Reactivity = 0

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

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

HMIS Long

Term Health Hazard13463-67-7 titanium dioxide

Substances

2.3 Other Hazards

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

assessment

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous Components:

| Hazardous Ingredient(s) | %W/W | CAS No. | EC No. | Index No. | Hazard Pictogram(s) | Hazard Statement(s) and Risk (R) Phrase(s) |
|---------------------------------------|---------|------------|-----------|--------------|------------------------|---|
| aluminium oxide | 65 - 88 | 1344-28-1 | 215-691-6 | NA | None | substance with a Community workplace exposure limit |
| | | | | | × | Xn R22-48/20 |
| manganese dioxide | 1 - 7 | 1313-13-9 | 215-202-6 | 025-001-00-3 | & | STOT RE 2, H373 |
| | | | | | () | Acute Tox. 4, H302; Acute Tox. 4, H332 |
| diiron trioxide / iron (III) oxide | 0 - 15 | 1309-37-1 | 215-168-2 | NA | None | substance with a Community workplace exposure limit |
| titanium dioxide | 0,5 - 2 | 13463-67-7 | 236-675-5 | NA | None | substance with a Community workplace exposure limit |

Dangerous Components (Alternative Classifications):

| Hazardous Ingredient(s) | %W/W | CAS No. | EC No. | Hazard Pictogram(s) | Hazard Statement(s) and Risk (R) Phrase(s) |
|--|---------|------------|-----------|------------------------|--|
| titanium dioxide (classification relevant for USA/Canada only) | 0,5 - 2 | 13463-67-7 | 236-675-5 | & | Carc. 2, H351 |

Additional information: For the wording of the listed risk phrases refer to section 16.

Notable Trace Components (≤ 0,1% w/w):

| Hazardous Ingredient(s) | %W/W | CAS No. | EC No. | Hazard Pictogram(s) | Hazard Statement(s) and Risk (R) Phrase(s) | |
|-------------------------|-------|------------|-----------|------------------------|--|--|
| | | | | × | Xn R48/20 | |
| cristobalite | ≤ 0,1 | 14464-46-1 | 238-455-4 | | Carc. 1A, H350; STOT RE 2, H373 | |

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.

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

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

After Swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for

medical help immediately.

4.2 Most Important

Hazards

Symptoms And Effects, Both Acute

Printing date: 11.02.2015

Slight irritant effect on eyes.

And Delayed

No further relevant information available.

4.3 Indication Of The Immediate Medical Attention And Special

No further relevant information available.

Treatment Needed

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing
Use fire extinguishing methods suitable to surrounding conditions.

Media

Unsuitable Extinguishing

None.

Media

5.2 Special Hazards Arising From The Substance Or

No further relevant information available.

Mixture

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, | Avoid formation of dust. For large spills, wear protective clothing. |
|-----|-----------------------------|--|
| | Protective Equipment And | For large spills, use respiratory protective device against the effects of |
| | Emergency Procedures | fumes/dust/aerosol. Ensure adequate ventilation |
| 6.2 | Environmental Precautions | No special measures required. |
| 6.3 | Methods And Material For | Pick up mechanically. Send for recovery or disposal in suitable |
| | Containment And Cleaning Up | receptacles. 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

| | Precautions For Safe | Any unavoidable deposit of dust must be regularly removed. Use only in well | | | |
|-----|---|---|--|--|--|
| 7.1 | Handling | ventilated areas. Do not dry clean dust covered objects and floors. Wash thoroughly | | | |
| | | with plenty of water. Prevent formation of dust. | | | |
| | Information About | No special measures required. | | | |
| | Fire - and explosion | | | | |
| | protection | | | | |
| 7.2 | Conditions For Safe Storage, Including Any Incompatibilities: | | | | |
| | Danuluamanta ta ba | No an add as a decision to | | | |

Requirements to be Met by Storerooms and Receptacles: No special requirements.

Information About Storage in One Common Storage

Store away from oxidizing agents. Store away from foodstuffs. Do not store together

with acids.

Facility:

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

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

Further information None. about storage conditions: 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: | | | | | | |
| | | PEL (USA) | Long-term value: 15*; 15** mg/m³ *Total dust; ** Respirable fraction | | | | |
| | | REL (USA) | Long-term value: 10* 5** mg/m³ as Al*Total dust**Respirable/pyro powd./welding f. | | | | |
| aluminium oxide | 1344-28-1 | TLV (USA) | Long-term value: 1* mg/m³ as AI; *as respirable fraction | | | | |
| | | EL (Canada) | Long-term value: 1,0 mg/m³ respirable, as Al | | | | |
| | | EV (Canada) | Long-term value: 10 mg/m³ total dust | | | | |
| | | PEL (USA) | Ceiling limit: 5 mg/m³ as Mn | | | | |
| manganese dioxide | 1313-13-9 | REL (USA) | Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ as Mn | | | | |
| | | TLV (USA) | Long-term value: 0,02* 0,1* mg/m³ as Mn; *respirable **inhalable fraction | | | | |
| | | EL (Canada) | Long-term value: 0,2 mg/m³ as Mn; R | | | | |
| |) 1309-37-1 | PEL (USA) | Long-term value: 10* 15** 5*** mg/m³ *Fume; Rouge: **Total dust, ***respirable | | | | |
| | | REL (USA) | Long-term value: 5 mg/m³ Dust & fume, as Fe | | | | |
| diiron trioxide / iron (III) oxide | | TLV (USA) | Long-term value: 5* mg/m³ *as respirable fraction | | | | |
| Oxido | | EL (Canada) | Short-term value: 10** mg/m³ Long-term value: 5* 10*** 3**** mg/m³ *dust & fume**fume; Rouge: ***total dust****resp. | | | | |
| | | EV (Canada) | Long-term value: 5* 10** mg/m³ *respirable, including Rouge;**total dust | | | | |
| | | PEL (USA) | Long-term value: 15* mg/m³ *total dust | | | | |
| | | REL (USA) | See Pocket Guide App. A | | | | |
| titanium dioxide | 13463-67-7 | TLV (USA) | Long-term value: 10 mg/m³ withdrawn from NIC | | | | |
| | | EL (Canada) | Long-term value: 10* 3** mg/m³ *total dust;**respirable fraction; IARC 2B | | | | |
| | | EV (Canada) | Long-term value: 10 mg/m³ total dust | | | | |

DNELs No further relevant information available. **PNECs** No further relevant information available.

Printing date: 11.02.2015

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

| 8.2 | Exposure Controls | | | |
|-------|---|--|--|--|
| 8.2.2 | Personal Protective Equipment: | | | |
| | General The usual precautionary measures are to be adhered to when handling chemi | | | |
| | protective and | Wash hands before breaks and at the end of work. Immediately remove all soiled and contaminated clothing. Keep away from foodstuffs, beverages and feed. | | |

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

Printing date: 11.02.2015

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

| hygienic measures: | |
|---|---|
| Respiratory Protection | Use suitable respiratory protective device when high concentrations are present. For spills, respiratory protection may be advisable. |
| Eye Protection | Wear safety glasses. |
| Protection of Hands | Wear protective gloves. |
| Body Protection | Not required under normal conditions of use. Protection may be required for spills. |
| 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 | Color | Yellow-brown | | |
| | Odor | Odourless | Odor Threshold (ppm) | Not available | | |
| | Melting Point (°C) / Freezing Point (°C) | >2012°F/ >1100 °C | Boiling Point/Boiling Range (°C) | >3632 °F/ >2000 °C | | |
| | 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) | 2,5 g/cm ³ | | |
| | 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 Chem | nical (VOC) Content – Not Availab | le. | | |

SECTION 10: STABILITY AND REACTIVITY

| 10.1 10.2 | Reactivity Chemical Stability | |
|--------------|---|---|
| | 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 | Prevent formation of dust. Store away from oxidising agents. Avoid acids. |
| 10.5 | Incompatible Materials | No further relevant information available. |
| 10.6 | Hazardous Decomposition Product(s) | Possible in traces. |

SECTION 11: TOXICOLOGICAL INFORMATION

| LD/LC50 values relevant for classification: | |
|---|--|
|---|--|

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

Printing date: 11.02.2015

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

| 1309-3 | 1309-37-1 diiron trioxide / iron (III) oxide | | | | | |
|-----------------------------|--|-------------|--|--|--|--|
| Oral | LD50 | >5000 mg/kg | (rat) | | | |
| 11.1 | 1 Information on Toxicological Effects | | | | | |
| | Acute toxicity: Primary Irritant Effect: | | | | | |
| | On the skin: | | No irritant effect. | | | |
| | On the eye: | | Slight irritant effect on eyes. | | | |
| | Sensitisation | n: | No sensitizing effects known. | | | |
| CMR effects (carcinogenity, | | | Contains known or suspect carcinogens when inhaled. | | | |
| | mutagenicity, and toxicity for | | Product is in non-inhalable form and is nonclassifiable as a | | | |
| | reproduction): | | carcinogen. | | | |

SECTION 12: ECOLOGICAL INFORMATION

| 12.1 | Toxicity | No data |
|------|------------------------------------|---|
| | Aquatic toxicity: | The product contains materials that are harmful to the environment. |
| 12.2 | Persistence and Degradability | No further relevant information available. |
| 12.3 | Bioaccumulative Potential | No further relevant information available. |
| 12.4 | Mobility in Soil | No further relevant information available. |
| | Additional ecological information: | |
| | General notes: | Not known to be hazardous to water. |
| 12.5 | Results of PBT and vPvB | PBT: Not applicable. |
| | Assessment | vPvB: Not applicable. |
| 12.6 | Other Adverse Effects | 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 manufacturer 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) (d | and Transport (ADR/RID) (c)(d) Land Transport (Within USA) (b)(d) | | 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 | |
| Transport Hazard Class(es) | None | Class(es) | None |
| Packing Group | None | Packing Group | None |
| Hazard Label(s) | None | Hazard Label(s) | None |
| Environmental Hazards | None | Environmental Hazards Special Precautions For | None |
| Special Precautions For User | None | User | None |
| Sea Transport (IMDG) (c) | | Air Transport (ICAO/IATA | A) (c) (d) |
| UN Number | None | UN Number | None |

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

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

| Proper Shipping Name | Not classified as dangerous for transport. | Proper Shipping Name | Not classified as dangerous for transport. |
|------------------------------|--|-------------------------|--|
| | | Transport Hazard | |
| Transport Hazard Class(es) | None | Class(es) | None |
| Packing Group | None | Packing Group | None |
| Marine Pollutant | None | Marine Pollutant | None |
| | | Special Precautions For | |
| Special Precautions For User | None | User | None |

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

Printing date: 11.02.2015

(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

| USA | s/Legislation Specific For The Substance Or Mixtu |
|--|---|
| SARA | |
| Section 355 (extremely hazardous substances) | None of the ingredients are listed. |
| SARA 313 (Specific toxic chemical listings) | 1344-28-1 aluminium oxide |
| TSCA (Toxic Substance Control Act) | All ingredients are listed. |
| Proposition 65 (California): | |
| Chemicals known to cause cancer: | References to chemical components listed below are based on unbound respirable particles and are not generally applicable to product as supplied. 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) | 1313-13-9 manganese dioxide |
| IARC (International Agency for Research on Cancer) | 7631-86-9 silicon dioxide, chemically prepared 1309-37-1 diiron trioxide / iron (III) oxide 13463-67-7 titanium dioxide |
| TLV (Threshold Limit Value established by ACGIH) | 1344-28-1 aluminium oxide 1309-37-1 diiron trioxide / iron (III) oxide 13463-67-7 titanium dioxide |
| MAK (German Maximum Workplace Concentration) | 1344-28-1 aluminium oxide 13463-67-7 titanium dioxide 14464-46-1 cristobalite |
| NIOSH-Ca (National Institute for Occupational Safety and Health) | 13463-67-7 titanium dioxide |
| Canada | |
| Canadian Domestic Substances List (DSL) | All ingredients are listed. |
| Canadian Ingredient Disclosure list (limit 0.1%) | None of the ingredients are listed. |



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

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

Canada Ingredient Disclosure list (limit 1%) 1344-28-1 aluminium oxide

7631-86-9 silicon dioxide, chemically prepared

1309-37-1 diiron trioxide / iron (III) oxide

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) None

according to REACH, Article 57

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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A Chemical Safety Assessment has not been carried

Revision: 11.02.2015

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.

Relevant phrases

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

R22 Harmful if swallowed.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Sources

SDS Prepared by:

Safety data sheet
According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and US GHS Printing date: 11.02.2015

Duramedia 120, 120C, 140, HDA, XM, XA (See Page 1)

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