

WASHINGTON MILLS

CERAMICS CORPORATION

MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia 30-Y Tumbling Media

Product Identification: Fired Ceramic Mass Finishing Media

Chemical Name: CODIERITE AND ALUMINA

Company Name: Washington Mills Ceramic Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 Fax (608) 837-0808

Emergency/Technical CHEMTREC: (716) 278-6763
(800) 424-9300

2.0 Composition/Information on Ingredients

Component	CAS No.	OSHA Exposure Limits (PEL)	ACGIH Rec. Limits (TLV)	Percent By Weight
Magnesium Aluminum Silicate Aluminum Oxide ¹	1302-88-1	N/A	N/A	64 - 100
Zirconium Oxide	1344-28-1	15 mg/m ³	10 mg/m ³	0 - 36
	1314-23-4	5mg/ m3	5 mg/ m3	0 - 10

¹ Non-Fibrous form of aluminum oxide

3.0 Hazard Identification/ Potential Health Effects

Eye: Brittle ceramic – broken pieces may cause damage to eyes.

Skin: Not absorbed through the skin. May cause abrasions.

Ingestion: Not recommended. Ingestion would be difficult but if accomplished could cause choking.

Inhalation: Inhalation is virtually impossible as material is too large and is normally used wet, preventing dust generation.

Chronic Effects: Available information did not show any adverse health effects.

4.0 First Aid Measures

Eyes: Wash with large amounts of water. Get medical attention, if needed.

Skin: Wash with water. Obtain first aid or medical assistance if needed.

Ingestion: If swallowed, seek medical attention.

5.0 Fire Fighting Measure

Flammable Properties: Non-flammable
Flash Point: None
Fire/Explosion Potential: None
Upper and Lower Flammable Limits: None
Autoignition Temperature: None
Special Fire Fighting Procedures: None

6.0 Accidental Release Measures

Personal Precautions: Wear protective equipment. See Section 8.

Cleanup Measures: Normal cleanup procedures. Dispose using standard landfill methods consistent with applicable Federal, State and Local laws.

7.0 Handling and Storage

Normal Storage: General storage, ambient air temperature and pressure.

Handling: No special precautions.

8.0 Exposure Controls, Personal Protection

Engineering Control: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposures below PELs or TLVs.

Respiratory Protection: Recommended if TLVs or PELs are exceeded. Use NIOSH/MSHA approved respirators.

Eye and Face Protection: Wear goggles if there is any possibility of eye contact.

9.0 Physical and Chemical Properties

Appearance: Yellow Ceramics in various shapes
Odor: Odorless **pH:** N/A
Boiling Point: >2000 °C **Melting Point:** >1100 °C
Flash Point: None **Explosive Properties:** None
Oxidizing Properties: None **Vapor Pressure:** N/A
Vapor Density: N/A **Specific Gravity:** 2.5
Water Solubility: Insoluble
Solubility in Other Solvent: Partially soluble in strong mineral acid

Manager, Environmental, Health & Safety

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Washington Mills Electro Minerals Corporation makes no expressed or implied warranty with respect to the accuracy of the information or the suitability of the recommendations and assumes no liability to any user thereof.

10.0 Stability and Reactivity

Chemical Stability: Stable **Incompatibility:** None
Polymerization: Will not occur **Conditions to Avoid:** N/A

11.0 Toxicological Information

Not Available

12.0 Ecological Information

Not Available

13.0 Disposal Considerations

Approved landfill in accordance with all local, state and federal regulations.

14.0 Transportation Information

US DOT - Not regulated as a hazardous material.

15.0 Regulatory Information

TSCA - The chemical components of this product are registered under the Toxic Substance Control Act (Title 40 CFR Part 710).

WASHINGTON MILLS

CERAMICS CORPORATION

MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia 120[®], Duramedia[®] 120C, Duramedia 140[®], Duramedia[®] 120S, Duramedia HDA[®], Duralum[®] XM

Product Identification: Fired ceramic, mass finishing media

Chemical Name: Not Established

Company Name: Washington Mills Ceramics Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 Fax (608) 837-0808

Emergency/Technical CHEMTREC (716) 278-6763
(800) 424-9300

2.0 Composition/Information on Ingredients

Component	EINECS	Percent By Weight	OSHA PEL (Exposure Guidelines)
Aluminium Oxide (CAS No. 1344-28-1)	215-28-1	50.0-90.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Magnesium Aluminum Silicate (CAS No. 1302-88-1)	N/A	64.0-100.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Iron Silicate (CAS No. 13918-37-1)	237-687-3	0-36.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Titanium Oxide (CAS No. 13463)	236-675-5	0-4.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³

3.0 Hazard Identification/Potential Health Effects

Eye: Potential mechanical eye irritant if fragmented or allowed to generate dust. May cause tearing and redness.

Skin: Not absorbed through the skin. Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.

Sensitization: No data available.
Ingestion: Not a probable route of entry. No long-term health effects are anticipated.

Inhalation: Not a probable route of entry. If used properly in wet applications, the potential for the formation of dust is negligible.

Target Organs: Eyes, skin.

Acute Effects: N/A

Chronic Effects: N/A

Signs & Symptoms: N/A

4.0 First Aid Measures

Eyes: Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.

Skin: Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.

Inhalation: Inhalation is an unlikely route of exposure. Remove person to fresh air. If signs/symptoms develop, seek medical attention.

Ingestion: Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

5.0 Fire Fighting Measure

Flammable/Combustible Properties: None

Extinguishing Media: Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.

Special Fire Fighting Procedures: In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.

Fire & Explosion Hazards: Not applicable. None inherent in this product.

6.0 Accidental Release Measures

Personal Safety Precautions: Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.

Environmental Precautions: Ensure material is properly disposed of.

Cleanup Measures: Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

7.0 Handling and Storage

Handling: Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.

Normal Storage: Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

8.0 Exposure Controls & Personal Controls

Engineering Controls: Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.

Hygienic Measures: Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.

Respiratory Protection: Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.

Eye Protection: Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.

Skin Protection: Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.

9.0 Physical and Chemical Properties

Formula:	N/A
Physical State	Solid
Boiling Point:	>2000 °C
Melting Point:	>1100 °C
pH at 20°:	N/A
Vapor Density:	N/A
Explosive Properties:	None
Solubility:	Insoluble
Appearance:	White to Tan
Odor:	Odorless
Flash Point:	N/A
Decomposition Temperature:	N/A
Vapor Pressure:	N/A
Oxidizing Properties:	N/A
Specific Gravity:	2.5
Bulk Density:	N/A

10.0 Stability and Reactivity

Chemical Stability:	Stable
Thermal Decomposition:	N/A
Incompatibility:	N/A
Conditions to Avoid:	None known
Hazardous Decomposition Products:	None expected
Dangerous Reactions:	None known
Hazardous Polymerization:	Will not occur

11.0 Toxicological Information

Data Not Available

12.0 Ecological Information

Ecotoxicity: Not Available

13.0 Disposal Considerations

Solid or chemical waste generators must determine whether a discarded waste is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local waste regulations to ensure complete and accurate classification.

14.0 Transportation Information

U.S. DOT: This product is not regulated by USDOT as a Hazardous Material (49 CFR 172.101). No UN code assigned. No placard required for transportation.

IMDG: Not regulated as a Hazardous Material.

ACA0/IATA: Not regulated as a Hazardous Material.

EU (ADR, RID) : Not regulated as a Hazardous Material.

15.0 Regulatory Information

TSCA: The chemical components of this product are registered under the Toxic Substances Control Act (40 CFR 710.4)

RCRA: This product is not classified as a hazardous material under RCRA or its regulations, 40 CFR 261.

CERCLA: This product is not classified as a hazardous substance under CERCLA regulations, 40 CFR 302.

SARA: This product is not an extremely hazardous substance in Section 302 and is not a toxic chemical subject to the requirements of 313.

Prepared by Kevin J. Schroeder, Environmental, Health and Safety Manger

The information above is believed to be accurate and represents the best information currently available to Washington Mills. However, Washington Mills makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and assumes no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Washington Mills be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Washington Mills has been advised of the possibility of such damages.

WASHINGTON MILLS

CERAMICS CORPORATION

MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia[®] 10, Duramedia[®] 20, Duramedia[®] 30, Duramedia[®] 40, Duramedia[®] WK, Duramedia[®] C, Duramedia[®] F, Duramedia[®] HE, Duramedia[®] FB, Duralite[®] II, Duramedia[®] PK, Duramedia[®] PK-20, Duramedia[®] PK-40

Product Identification: Fired ceramic, mass finishing media

Chemical Name: Not Established

Company Name: Washington Mills Ceramics Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 Fax (608) 837-0808

Emergency/Technical CHEMTREC (716) 278-6763
(800) 424-9300

2.0 Composition/Information on Ingredients

Component	EINECS	Percent By Weight	OSHA PEL (Exposure Guidelines)
Magnesium Aluminum Silicate (CAS No. 1302-88-1)	N/A	64.0-100.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Aluminum Oxide (CAS No. 1344-28-1)	215-28-1	0-36.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Titanium Oxide (CAS No. 13463)	236-675-5	0-4.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³

3.0 Hazard Identification/Potential Health Effects

Eye: Potential mechanical eye irritant if fragmented or allowed to generate dust. May cause tearing and redness.

Skin: Not absorbed through the skin. Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.

Sensitization: No data available.
Ingestion: Not a probable route of entry. No long-term health effects are anticipated.

Inhalation: Not a probable route of entry. If used properly in wet applications, the potential for the formation of dust is negligible.

Target Organs: Eyes, skin.
Acute Effects: N/A
Chronic Effects: N/A
Signs & Symptoms: N/A

4.0 First Aid Measures

Eyes: Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.

Skin: Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.

Inhalation: Inhalation is an unlikely route of exposure. Remove person to fresh air. If signs/symptoms develop, seek medical attention.

Ingestion: Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

5.0 Fire Fighting Measure

Flammable/Combustible Properties: None
Extinguishing Media: Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.
Special Fire Fighting Procedures: In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.
Fire & Explosion Hazards: Not applicable. None inherent in this product.

6.0 Accidental Release Measures

Personal Safety Precautions: Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.
Environmental Precautions: Ensure material is properly disposed of.
Cleanup Measures: Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

7.0 Handling and Storage

Handling: Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.

Normal Storage: Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

8.0 Exposure Controls & Personal Controls

Engineering Controls: Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.

Hygienic Measures: Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.

Respiratory Protection: Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.

Eye Protection: Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.

Skin Protection: Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.

9.0 Physical and Chemical Properties

Formula:	N/A
Physical State:	Solid
Boiling Point:	>2000 °C
Melting Point:	>1100 °C
pH at 20°:	N/A
Vapor Density:	N/A
Explosive Properties:	None
Solubility:	Insoluble
Appearance:	White to Tan
Odor:	Odorless
Flash Point:	N/A
Decomposition Temperature:	N/A
Vapor Pressure:	N/A
Oxidizing Properties:	None
Specific Gravity:	2.5
Bulk Density:	N/A

10.0 Stability and Reactivity

Chemical Stability:	Stable
Thermal Decomposition:	N/A
Incompatibility:	N/A
Conditions to Avoid:	None known
Hazardous Decomposition Products:	None expected
Dangerous Reactions:	None known
Hazardous Polymerization:	Will not occur

11.0 Toxicological Information

Data Not Available

12.0 Ecological Information

Ecotoxicity: Not Available

13.0 Disposal Considerations

Solid or chemical waste generators must determine whether a discarded waste is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local waste regulations to ensure complete and accurate classification.

14.0 Transportation Information

U.S. DOT: This product is not regulated by USDOT as a Hazardous Material (49 CFR 172.101). No UN code assigned. No placard required for transportation.

IMDG: Not regulated as a Hazardous Material.

ACAQ/IATA: Not regulated as a Hazardous Material.

EU (ADR, RID): Not regulated as a Hazardous Material.

15.0 Regulatory Information

TSCA: The chemical components of this product are registered under the Toxic Substances Control Act (40 CFR 710.4)

RCRA: This product is not classified as a hazardous material under RCRA or its regulations, 40 CFR 261.

CERCLA: This product is not classified as a hazardous substance under CERCLA regulations, 40 CFR 302.

SARA: This product is not an extremely hazardous substance in Section 302 and is not a toxic chemical subject to the requirements of 313.

Prepared by Kevin J. Schroeder, Environmental, Health and Safety Manger

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WASHINGTON MILLS
CERAMICS CORPORATION
MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia® H, Duramedia® PZ

Product Identification: Fired ceramic, mass finishing media

Chemical Name: Not Established

Company Name: Washington Mills Ceramics Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 Fax (608) 837-0808

Emergency/Technical (716) 278-6763
CHEMTREC (800) 424-9300

2.0 Composition/Information on Ingredients

Component	EINECS	Percent By Weight	OSHA PEL (Exposure Guidelines)
Magnesium Aluminum Silicate (CAS No. 1302-88-1)	N/A	30.0-60.0	Total (TWA) 15 mg/m ³ Respirable(TWA)
Aluminum Oxide (CAS No. 1344-28-1)	215-28-1	0.0-36.0	Total (TWA) 15 mg/m ³ Respirable(TWA)
Zirconium Silicate (CAS No. 10101-52-7)	233-252-7 N/A	30.0-60.0	Total (TWA) 5 mg/m ³ (as Zr) Respirable(TWA)

3.0 Hazard Identification/Potential Health Effects

Eye: Potential mechanical eye irritant if fragmented or allowed to generate dust. May cause tearing and redness.

Skin: Not absorbed through the skin. Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.

Sensitization: No data available.

Ingestion: Not a probable route of entry. No long-term health effects are anticipated.

Inhalation: Not a probable route of entry. If used properly in wet applications, the potential for the formation of dust is negligible.

Target Organs: Eyes, skin.
Acute Effects: N/A
Chronic Effects: N/A
Signs & Symptoms: N/A

4.0 First Aid Measures

Eyes: Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.

Skin: Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.

Inhalation: Inhalation is an unlikely route of exposure. Remove person to fresh air. If signs/symptoms develop, seek medical attention.

Ingestion: Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

5.0 Fire Fighting Measure

Flammable/Combustible Properties: None

Extinguishing Media: Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.

Special Fire Fighting Procedures: In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.

Fire & Explosion Hazards: Not applicable. None inherent in this product.

6.0 Accidental Release Measures

Personal Safety Precautions: Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.

Environmental Precautions: Ensure material is properly disposed of.

Cleanup Measures: Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

7.0 Handling and Storage

Handling: Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.

Normal Storage: Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

8.0 Exposure Controls & Personal Controls

Engineering Controls: Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.

Hygienic Measures: Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.

Respiratory Protection: Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.

Eye Protection: Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.

Skin Protection: Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.

9.0 Physical and Chemical Properties

Formula:	N/A
Physical State:	Solid
Boiling Point:	>2000 °C
Melting Point:	>1100 °C
pH at 20°:	N/A
Vapor Density:	N/A
Explosive Properties:	None
Solubility:	Insoluble
Appearance:	White to Tan
Odor:	Odorless
Flash Point:	N/A
Decomposition Temperature:	N/A
Vapor Pressure:	N/A
Oxidizing Properties:	N/A
Specific Gravity:	2.5
Bulk Density:	N/A

10.0 Stability and Reactivity

Chemical Stability:	Stable
Thermal Decomposition:	N/A
Incompatibility:	N/A
Conditions to Avoid:	None known
Hazardous Decomposition Products:	None expected
Dangerous Reactions:	None known
Hazardous Polymerization:	Will not occur

11.0 Toxicological Information

Data Not Available

12.0 Ecological Information

Ecotoxicity: Not Available

13.0 Disposal Considerations

Solid or chemical waste generators must determine whether a discarded waste is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local waste regulations to ensure complete and accurate classification.

14.0 Transportation Information

U.S. DOT: This product is not regulated by USDOT as a Hazardous Material (49 CFR 172.101). No UN code assigned. No placard required for transportation.

IMDG: Not regulated as a Hazardous Material.

ACAO/IATA: Not regulated as a Hazardous Material.

EU (ADR, RID): Not regulated as a Hazardous Material.

15.0 Regulatory Information

TSCA: The chemical components of this product are registered under the Toxic Substances Control Act (40 CFR 710.4)

RCRA: This product is not classified as a hazardous material under RCRA or its regulations, 40 CFR 261.

CERCLA: This product is not classified as a hazardous substance under CERCLA regulations, 40 CFR 302.

SARA: This product is not an extremely hazardous substance in Section 302 and is not a toxic chemical subject to the requirements of 313.

by Kevin J. Schroeder, Environmental, Health and Safety Manger

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WASHINGTON MILLS
CERAMICS CORPORATION
MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia® 50, Duramedia® SC, Duralite® II-S

Product Identification: Fired ceramic, mass finishing media

Chemical Name: Not Established

Company Name: Washington Mills Ceramics Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 Fax (608) 837-0808

Emergency/Technical (716) 278-6763
CHEMTREC (800) 424-9300

2.0 Composition/Information on Ingredients

Component	EINECS	Percent By Weight	OSHA PEL (Exposure Guidelines)
Magnesium			Total (TWA)
Aluminum	N/A	80.0-96.0	15 mg/m ³
Silicate (CAS No. 1302-88-1)			Respirable(TWA) 5 mg/m ³
Silicon Carbide (CAS No. 409-21-2)	206-991-8	4.0-20.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³

3.0 Hazard Identification/Potential Health Effects

Eye: Potential mechanical eye irritant if fragmented or allowed to generate dust. May cause tearing and redness.

Skin: Not absorbed through the skin. Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.

Sensitization: No data available.

Ingestion: Not a probable route of entry. No long-term health effects are anticipated.

Inhalation: Not a probable route of entry. If used properly in wet applications, the potential for the formation of dust is negligible.

Target Organs: Eyes, skin.

Acute Effects: N/A

Chronic Effects: N/A

Signs & Symptoms: N/A

4.0 First Aid Measures

Eyes: Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.

Skin: Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.

Inhalation: Inhalation is an unlikely route of exposure. Remove person to fresh air. If signs/symptoms develop, seek medical attention.

Ingestion: Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

5.0 Fire Fighting Measure

Flammable/Combustible Properties: None

Extinguishing Media: Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.

Special Fire Fighting Procedures: In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.

Fire & Explosion Hazards: Not applicable. None inherent in this product.

6.0 Accidental Release Measures

Personal Safety Precautions: Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.

Environmental Precautions: Ensure material is properly disposed of.

Cleanup Measures: Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

7.0 Handling and Storage

Handling: Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.

Normal Storage: Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

8.0 Exposure Controls & Personal Controls

Engineering Controls: Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.

Hygienic Measures: Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.

Respiratory Protection: Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.

Eye Protection: Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.

Skin Protection: Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.

9.0 Physical and Chemical Properties

Formula:	N/A
Physical State:	Solid
Boiling Point:	>2000 °C
Melting Point:	>1100 °C
pH at 20°:	N/A
Vapor Density:	N/A
Explosive Properties:	None
Solubility:	Insoluble
Appearance:	White to Tan
Odor:	Odorless
Flash Point:	N/A
Decomposition Temperature:	N/A
Vapor Pressure:	N/A
Oxidizing Properties:	N/A
Specific Gravity:	2.5
Bulk Density:	N/A

10.0 Stability and Reactivity

Chemical Stability:	Stable
Thermal Decomposition:	N/A
Incompatibility:	N/A
Conditions to Avoid:	None known
Hazardous Decomposition Products:	None expected
Dangerous Reactions:	None known
Hazardous Polymerization:	Will not occur

11.0 Toxicological Information

Data Not Available

12.0 Ecological Information

Ecotoxicity: Not Available

13.0 Disposal Considerations

Solid or chemical waste generators must determine whether a discarded waste is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local waste regulations to ensure complete and accurate classification.

14.0 Transportation Information

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CAAO/IATA: Not regulated as a Hazardous Material.

EU (ADR, RID): Not regulated as a Hazardous Material.

15.0 Regulatory Information

TSCA: The chemical components of this product are registered under the Toxic Substances Control Act (40 CFR 710.4)

RCRA: This product is not classified as a hazardous material under RCRA or its regulations, 40 CFR 261.

CERCLA: This product is not classified as a hazardous substance under CERCLA regulations, 40 CFR 302.

SARA: This product is not an extremely hazardous substance in Section 302 and is not a toxic chemical subject to the requirements of 313.

Prepared by Kevin J. Schroeder, Environmental, Health and Safety Manger

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WASHINGTON MILLS

CERAMICS CORPORATION

MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia TB

Product Identification: Fired Ceramic Mass Finishing Media

Chemical Name: CODIERITE AND ALUMINA

Company Name: Washington Mills Ceramic Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 Fax (608) 837-0808

Emergency/Technical CHEMTREC: (716) 278-6763
(800) 424-9300

2.0 Composition/Information on Ingredients

<u>Component</u>	<u>CAS No.</u>	<u>OSHA Exposure Limits (PEL)</u>	<u>ACGIH Rec. Limits (TLV)</u>	<u>Percent By Weight</u>
Magnesium Aluminum Silicate	1302-88-1	N/A	N/A	64 - 100
Aluminum Oxide¹	1344-28-1	15 mg/m ³	10 mg/m ³	0 - 36

¹ Non-Fibrous form of aluminum oxide

3.0 Hazard Identification/ Potential Health Effects

Eye: Brittle ceramic – broken pieces may cause damage to eyes.

Skin: Not absorbed through the skin. May cause abrasions.

Ingestion: Not recommended. Ingestion would be difficult but if accomplished could cause choking.

Inhalation: Inhalation is virtually impossible as material is too large and is normally used wet, preventing dust generation.

Chronic Effects: Available information did not show any adverse health effects.

4.0 First Aid Measures

Eyes: Wash with large amounts of water. Get medical attention, if needed.

Skin: Wash with water. Obtain first aid or medical assistance if needed.

Ingestion: If swallowed, seek medical attention.

5.0 Fire Fighting Measure

Flammable Properties: Non-flammable
Flash Point: None **Fire/Explosion Potential:** None
Upper and Lower Flammable Limits: None
Autoignition Temperature: None
Special Fire Fighting Procedures: None

6.0 Accidental Release Measures

Personal Precautions: Wear protective equipment. See Section 8.

Cleanup Measures: Normal cleanup procedures. Dispose using standard landfill methods consistent with applicable Federal, State and Local laws.

7.0 Handling and Storage

Normal Storage: General storage, ambient air temperature and pressure.

Handling: No special precautions.

8.0 Exposure Controls, Personal Protection

Engineering Control: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposures below PELs or TLVs.

Respiratory Protection: Recommended if TLVs or PELs are exceeded. Use NIOSH/MSHA approved respirators.

Eye and Face Protection: Wear goggles if there is any possibility of eye contact.

9.0 Physical and Chemical Properties

Appearance: Blue ceramic in various shapes
Odor: Odorless **pH:** N/A
Boiling Point: >2000 °C **Melting Point:** >1100 °C
Flash Point: None **Explosive Properties:** None
Oxidizing Properties: None **Vapor Pressure:** N/A
Vapor Density: N/A **Specific Gravity:** 2.5
Water Solubility: Insoluble
Solubility in Other Solvent: Partially soluble in strong mineral acid

10.0 Stability and Reactivity

Chemical Stability: Stable **Incompatibility:** None
Polymerization: Will not occur **Conditions to Avoid:** N/A

11.0 Toxicological Information

Not Available

12.0 Ecological Information

Not Available

13.0 Disposal Considerations

Approved landfill in accordance with all local, state and federal regulations.

14.0 Transportation Information

US DOT - Not regulated as a hazardous material.

15.0 Regulatory Information

TSCA - The chemical components of this product are registered under the Toxic Substance Control Act (Title 40 CFR Part 710).

Prepared By: Margaret A. O'Brien,
Manager, Environmental, Health & Safety

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WASHINGTON MILLS

CERAMICS CORPORATION

MATERIAL SAFETY DATA SHEET

1.0 Chemical Product and Company Identification

Product Name: Duramedia® XC, Duramedia® ECH
Product Identification: Fired ceramic, mass finishing media
Chemical Name: Not Established
Company Name: Washington Mills Ceramics Corp.
165 King Street
Sun Prairie, WI 53590
(608) 837-5155 **Fax** (608) 837-0808
Emergency/Technical (716) 278-6763
CHEMTREC (800) 424-9300

2.0 Composition/Information on Ingredients

<u>Component</u>	<u>EINECS</u>	<u>Percent By Weight</u>	<u>OSHA PEL (Exposure Guidelines)</u>
Magnesium Aluminum Oxide (CAS No. 1302-88-1)	N/A	64.0-100.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Aluminum Oxide (CAS No. 1344-28-1)	215-28-1	0-36.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Titanium Oxide (CAS No. 13463)	236-675-5	0-4.0	Total (TWA) 15 mg/m ³ Respirable(TWA) 5 mg/m ³
Chromium (III) Oxide (CAS No. 1308-38-9)	215-160-9	0.5-2.0	Total (TWA) .05 mg/m ³ Respirable(TWA) N/A mg/m ³

3.0 Hazard Identification/Potential Health Effects

Eye: Potential mechanical eye irritant if fragmented or allowed to generate dust. May cause tearing and redness.
Skin: Not absorbed through the skin. Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.
Sensitization: No data available.
Ingestion: Not a probable route of entry. No long-term health effects are anticipated.

Inhalation: Not a probable route of entry. If used properly in wet applications, the potential for the formation of dust is negligible.
Target Organs: Eyes, skin.
Acute Effects: N/A
Chronic Effects: N/A
Signs & Symptoms: N/A

4.0 First Aid Measures

Eyes: Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.
Skin: Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.
Inhalation: Inhalation is an unlikely route of exposure. Remove person to fresh air. If signs/symptoms develop, seek medical attention.
Ingestion: Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

5.0 Fire Fighting Measure

Flammable/Combustible Properties: None
Extinguishing Media: Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.
Special Fire Fighting Procedures: In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.
Fire & Explosion Hazards: Not applicable. None inherent in this product.

6.0 Accidental Release Measures

Personal Safety Precautions: Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.
Environmental Precautions: Ensure material is properly disposed of.
Cleanup Measures: Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

7.0 Handling and Storage

Handling: Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.

Normal Storage: Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

8.0 Exposure Controls & Personal Controls

Engineering Controls: Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.

Hygienic Measures: Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.

Respiratory Protection: Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.

Eye Protection: Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.

Skin Protection: Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.

9.0 Physical and Chemical Properties

Formula:	N/A
Physical State:	Solid
Boiling Point:	>2000 °C
Melting Point:	>1100 °C
pH at 20°:	N/A
Vapor Density:	N/A
Explosive Properties:	None
Solubility:	Insoluble
Appearance:	White to Tan
Odor:	Odorless
Flash Point:	N/A
Decomposition Temperature:	N/A
Vapor Pressure:	N/A
Oxidizing Properties:	N/A
Specific Gravity:	2.5
Bulk Density:	N/A

10.0 Stability and Reactivity

Chemical Stability:	Stable
Thermal Decomposition:	N/A
Incompatibility:	N/A
Conditions to Avoid:	None known
Hazardous Decomposition Products:	None expected
Dangerous Reactions:	None known
Hazardous Polymerization:	Will not occur

11.0 Toxicological Information

Data Not Available

12.0 Ecological Information

Ecotoxicity: Not Available

13.0 Disposal Considerations

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