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# MATERIAL SAFETY DATA SHEET

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## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

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**Identity:** M-1 Mist Gray

**Manufacturer's Name:** Minnesota Clay

**Address:** 2960 Niagara Lane, Plymouth MN 55447

**Tel Phone:** (763) 432-0875

**Emergency Tel:** None

**Date Prepared:** July 29, 2011

**Replaces MSDS dated:** N/A

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## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

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INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
		PEL	TLV		
Clay/Kaolin	1332-58-7	15	2	NA	NA
Silica (Quartz)	14808-60-7	<u>10mg/m<sup>3</sup></u> %Silica+2	0.025	NA	NA
Calcium Carbonate	1317-65-3	15	NA	6540	NA
Pigments	Varies	NA	NA	NA	NA

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## SECTION 3 - HAZARD IDENTIFICATION

---

Primary Route of Entry - Inhalation (dry form only), ingestion and dermal.

Hazards - May cause skin and eye irritation, Lung effects including cancer, silicosis

Silica, Crystalline (Quartz)

A single exposure will not result in serious adverse health effects.

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. There are some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. Silicosis increases the

risk of tuberculosis. Some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

#### Calcium Carbonate

Overexposure may result in irritation to eyes, skin and respiratory system. Chronic exposure may result in hyperclacemica, alkalosis, and renal impairment. Animal studies suggest that inhalation may enhance susceptibility to respiratory infection.

#### Pigments (Stains)

Contains pigments which are produced from various metal salts, and/or other organic chemicals. Many of these pigments are in the form of spinel, which are formed by the reaction of these different metal salts at high temperature into essentially insoluble homogeneous pigment crystals. Spinel is considered of less hazardous than the individual metals they contain. The pigments used may contain one or more of the following: silica (quartz), cobalt, vanadium, copper, iron, manganese, chromium and cadmium (encapsulated).

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### **SECTION 4 - FIRST-AID MEASURES**

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Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

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### **SECTION 5 - FIRE-FIGHTING MEASURES**

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Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown

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**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

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Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

**SECTION 7 - HANDLING AND STORAGE**

---

Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder

pH - N/A

Explosive Properties - N/A

Oxidizing Properties - N/A

Odor and Odor Threshold - N/A

Boiling Point - N/A

Partition Coefficient - N/A

Solubility in Water - No

Vapor Pressure - N/A

Freezing Point - N/A

Percent Volatile - N/A

Specific Gravity - N/A

Vapor Density - N/A

Flash Point - N/A

Applicable Evaporation Rate - N/A

Flammable Limits - N/A

Melting/Softening Point - None

Auto-Ignition Temperature - N/A

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## **SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown

Hazardous Polymerization - None

Hazardous Decomposition Products - None

Conditions to Avoid - None

Incompatibility – Unknown

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## **SECTION 11 - TOXICOLOGICAL INFORMATION**

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Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

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## **SECTION 12 - ECOLOGICAL INFORMATION**

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No specific information available.

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**SECTION 13 - DISPOSAL INFORMATION**

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Dispose according to local regulations. No specific information available.

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**SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

---

Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

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**SECTION 16 - OTHER INFORMATION**

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Conforms to D 4236

No other specific information available.

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# MATERIAL SAFETY DATA SHEET

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## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

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**Identity:** M-2 Metallic Slate

**Manufacturer's Name:** Minnesota Clay

**Address:** 2960 Niagara Lane, Plymouth MN 55447

**Tel Phone:** (763) 432-0875

**Emergency Tel:** None

**Date Prepared:** July 29, 2011

**Replaces MSDS dated:** N/A

---

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

---

INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
		PEL	TLV		
Clay/Kaolin	1332-58-7	15	2	NA	NA
Silica (Quartz)	14808-60-7	<u>10mg/m<sup>3</sup></u> %Silica+2	0.025	NA	NA
Calcium Carbonate	1317-65-3	15	NA	6540	NA
Pigments	Varies	NA	NA	NA	NA

---

## SECTION 3 - HAZARD IDENTIFICATION

---

Primary Route of Entry - Inhalation (dry form only), ingestion and dermal.

Hazards - May cause skin and eye irritation, Lung effects including cancer, silicosis

Silica, Crystalline (Quartz)

A single exposure will not result in serious adverse health effects.

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. There are some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. Silicosis increases the

risk of tuberculosis. Some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

#### Calcium Carbonate

Overexposure may result in irritation to eyes, skin and respiratory system. Chronic exposure may result in hyperclacemica, alkalosis, and renal impairment. Animal studies suggest that inhalation may enhance susceptibility to respiratory infection.

#### Pigments (Stains)

Contains pigments which are produced from various metal salts, and/or other organic chemicals. Many of these pigments are in the form of spinel, which are formed by the reaction of these different metal salts at high temperature into essentially insoluble homogeneous pigment crystals. Spinel is considered of less hazardous than the individual metals they contain. The pigments used may contain one or more of the following: silica (quartz), cobalt, vanadium, copper, iron, manganese, chromium and cadmium (encapsulated).

---

### **SECTION 4 - FIRST-AID MEASURES**

---

Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

---

### **SECTION 5 - FIRE-FIGHTING MEASURES**

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Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown

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## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

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Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

## **SECTION 7 - HANDLING AND STORAGE**

---

Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

## **SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder

pH - N/A

Explosive Properties - N/A

Oxidizing Properties - N/A

Odor and Odor Threshold - N/A

Boiling Point - N/A

Partition Coefficient - N/A

Solubility in Water - No



Vapor Pressure - N/A

Freezing Point - N/A

Percent Volatile - N/A

Specific Gravity - N/A

Vapor Density - N/A

Flash Point - N/A

Applicable Evaporation Rate - N/A

Flammable Limits - N/A

Melting/Softening Point - None

Auto-Ignition Temperature - N/A

---

## **SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown

Hazardous Polymerization - None

Hazardous Decomposition Products - None

Conditions to Avoid - None

Incompatibility – Unknown

---

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

---

Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

---

## **SECTION 12 - ECOLOGICAL INFORMATION**

---

No specific information available.

---

**SECTION 13 - DISPOSAL INFORMATION**

---

Dispose according to local regulations. No specific information available.

---

**SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

---

Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

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**SECTION 16 - OTHER INFORMATION**

---

Conforms to D 4236

No other specific information available.

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# MATERIAL SAFETY DATA SHEET

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## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

---

**Identity:** M-3 Porcelain  
**Manufacturer's Name:** Minnesota Clay  
**Address:** 2960 Niagara Lane, Plymouth MN 55447  
**Tel Phone:** (763) 432-0875  
**Emergency Tel:** None  
**Date Prepared:** July 29, 2011  
**Replaces MSDS dated:** N/A

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## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

---

INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
		PEL	TLV		
Clay/Kaolin	1332-58-7	15	2	NA	NA
Silica (Quartz)	14808-60-7	<u>10mg/m<sup>3</sup></u> %Silica+2	0.025	NA	NA
Calcium Carbonate	1317-65-3	15	NA	6540	NA

---

## SECTION 3 - HAZARD IDENTIFICATION

---

Primary Route of Entry - Inhalation (dry form only), ingestion and dermal.

Hazards - May cause skin and eye irritation, Lung effects including cancer, silicosis

Silica, Crystalline (Quartz)

A single exposure will not result in serious adverse health effects.

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. There are some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. Silicosis increases the risk of tuberculosis. Some studies that show an increased incidence of chronic kidney

disease and end-stage renal disease in workers exposed to respirable crystalline silica.

#### Calcium Carbonate

Overexposure may result in irritation to eyes, skin and respiratory system. Chronic exposure may result in hyperclacemica, alkalosis, and renal impairment. Animal studies suggest that inhalation may enhance susceptibility to respiratory infection.

---

### **SECTION 4 - FIRST-AID MEASURES**

---

Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

---

### **SECTION 5 - FIRE-FIGHTING MEASURES**

---

Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown

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### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

---

Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

**SECTION 7 - HANDLING AND STORAGE**

---

Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder

Vapor Pressure - N/A

Explosive Properties - N/A

Percent Volatile - N/A

Odor and Odor Threshold - N/A

Vapor Density - N/A

Partition Coefficient - N/A

Applicable Evaporation Rate - N/A

pH - N/A

Melting/Softening Point – None

Oxidizing Properties - N/A

Freezing Point - N/A

Boiling Point - N/A

Specific Gravity - N/A

Solubility in Water - No

Flash Point - N/A

Flammable Limits - N/A

Auto-Ignition Temperature - N/A

---

## **SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown

Hazardous Polymerization - None

Hazardous Decomposition Products - None

Conditions to Avoid - None

Incompatibility – Unknown

---

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

---

Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

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## **SECTION 12 - ECOLOGICAL INFORMATION**

---

No specific information available.

---

## **SECTION 13 - DISPOSAL INFORMATION**

---

Dispose according to local regulations. No specific information available.

---

## **SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

---

Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

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**SECTION 16 - OTHER INFORMATION**

---

Conforms to D 4236

No other specific information available.

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# MATERIAL SAFETY DATA SHEET

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## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

---

**Identity:** M-4 Butterscotch  
**Manufacturer's Name:** Minnesota Clay  
**Address:** 2960 Niagara Lane, Plymouth MN 55447  
**Tel Phone:** (763) 432-0875  
**Emergency Tel:** None  
**Date Prepared:** July 29, 2011  
**Replaces MSDS dated:** N/A

---

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

---

INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
		PEL	TLV		
Clay/Kaolin	1332-58-7	15	2	NA	NA
Silica (Quartz)	14808-60-7	<u>10mg/m<sup>3</sup></u> %Silica+2	0.025	NA	NA
Calcium Carbonate	1317-65-3	15	NA	6540	NA
Pigments	Varies	NA	NA	NA	NA

---

## SECTION 3 - HAZARD IDENTIFICATION

---

Primary Route of Entry - Inhalation (dry form only), ingestion and dermal.

Hazards - May cause skin and eye irritation, Lung effects including cancer, silicosis

Silica, Crystalline (Quartz)

A single exposure will not result in serious adverse health effects.

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. There are some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. Silicosis increases the



risk of tuberculosis. Some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

#### Calcium Carbonate

Overexposure may result in irritation to eyes, skin and respiratory system. Chronic exposure may result in hyperclacemica, alkalosis, and renal impairment. Animal studies suggest that inhalation may enhance susceptibility to respiratory infection.

#### Pigments (Stains)

Contains pigments which are produced from various metal salts, and/or other organic chemicals. Many of these pigments are in the form of spinel, which are formed by the reaction of these different metal salts at high temperature into essentially insoluble homogeneous pigment crystals. Spinel is considered of less hazardous than the individual metals they contain. The pigments used may contain one or more of the following: silica (quartz), cobalt, vanadium, copper, iron, manganese, chromium and cadmium (encapsulated).

---

### **SECTION 4 - FIRST-AID MEASURES**

---

Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

---

### **SECTION 5 - FIRE-FIGHTING MEASURES**

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Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown

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**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

---

Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

**SECTION 7 - HANDLING AND STORAGE**

---

Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder

pH - N/A

Explosive Properties - N/A

Oxidizing Properties - N/A

Odor and Odor Threshold - N/A

Boiling Point - N/A

Partition Coefficient - N/A

Solubility in Water - No

Vapor Pressure - N/A

Freezing Point - N/A

Percent Volatile - N/A

Specific Gravity - N/A

Vapor Density - N/A

Flash Point - N/A

Applicable Evaporation Rate - N/A

Flammable Limits - N/A

Melting/Softening Point - None

Auto-Ignition Temperature - N/A

---

## **SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown

Hazardous Polymerization - None

Hazardous Decomposition Products - None

Conditions to Avoid - None

Incompatibility – Unknown

---

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

---

Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

---

## **SECTION 12 - ECOLOGICAL INFORMATION**

---

No specific information available.

---

**SECTION 13 - DISPOSAL INFORMATION**

---

Dispose according to local regulations. No specific information available.

---

**SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

---

Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

---

**SECTION 16 - OTHER INFORMATION**

---

Conforms to D 4236

No other specific information available.

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# MATERIAL SAFETY DATA SHEET

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## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

---

**Identity:** M-5 Faience Blue  
**Manufacturer's Name:** Minnesota Clay  
**Address:** 2960 Niagara Lane, Plymouth MN 55447  
**Tel Phone:** (763) 432-0875  
**Emergency Tel:** None  
**Date Prepared:** July 29, 2011  
**Replaces MSDS dated:** N/A

---

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

---

INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
		PEL	TLV		
Clay/Kaolin	1332-58-7	15	2	NA	NA
Silica (Quartz)	14808-60-7	<u>10mg/m<sup>3</sup></u> %Silica+2	0.025	NA	NA
Calcium Carbonate	1317-65-3	15	NA	6540	NA
Pigments	Varies	NA	NA	NA	NA

---

## SECTION 3 - HAZARD IDENTIFICATION

---

Primary Route of Entry - Inhalation (dry form only), ingestion and dermal.

Hazards - May cause skin and eye irritation, Lung effects including cancer, silicosis

Silica, Crystalline (Quartz)

A single exposure will not result in serious adverse health effects.

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. There are some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. Silicosis increases the

risk of tuberculosis. Some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

#### Calcium Carbonate

Overexposure may result in irritation to eyes, skin and respiratory system. Chronic exposure may result in hyperclacemica, alkalosis, and renal impairment. Animal studies suggest that inhalation may enhance susceptibility to respiratory infection.

#### Pigments (Stains)

Contains pigments which are produced from various metal salts, and/or other organic chemicals. Many of these pigments are in the form of spinel, which are formed by the reaction of these different metal salts at high temperature into essentially insoluble homogeneous pigment crystals. Spinel is considered of less hazardous than the individual metals they contain. The pigments used may contain one or more of the following: silica (quartz), cobalt, vanadium, copper, iron, manganese, chromium and cadmium (encapsulated).

---

### **SECTION 4 - FIRST-AID MEASURES**

---

Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

---

### **SECTION 5 - FIRE-FIGHTING MEASURES**

---

Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown

---

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

---

Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

**SECTION 7 - HANDLING AND STORAGE**

---

Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder

pH - N/A

Explosive Properties - N/A

Oxidizing Properties - N/A

Odor and Odor Threshold - N/A

Boiling Point - N/A

Partition Coefficient - N/A

Solubility in Water - No

Vapor Pressure - N/A

Freezing Point - N/A

Percent Volatile - N/A

Specific Gravity - N/A

Vapor Density - N/A

Flash Point - N/A

Applicable Evaporation Rate - N/A

Flammable Limits - N/A

Melting/Softening Point - None

Auto-Ignition Temperature - N/A

---

## **SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown

Hazardous Polymerization - None

Hazardous Decomposition Products - None

Conditions to Avoid - None

Incompatibility – Unknown

---

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

---

Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

---

## **SECTION 12 - ECOLOGICAL INFORMATION**

---

No specific information available.



---

**SECTION 13 - DISPOSAL INFORMATION**

---

Dispose according to local regulations. No specific information available.

---

**SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

---

Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

---

**SECTION 16 - OTHER INFORMATION**

---

Conforms to D 4236

No other specific information available.

---

# MATERIAL SAFETY DATA SHEET

---

## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

---

**Identity:** M-9 Danish Green

**Manufacturer's Name:** Minnesota Clay

**Address:** 2960 Niagara Lane, Plymouth MN 55447

**Tel Phone:** (763) 432-0875

**Emergency Tel:** None

**Date Prepared:** July 29, 2011

**Replaces MSDS dated:** N/A

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## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

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INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
		PEL	TLV		
Clay/Kaolin	1332-58-7	15	2	NA	NA
Silica (Quartz)	14808-60-7	<u>10mg/m<sup>3</sup></u> %Silica+2	0.025	NA	NA
Calcium Carbonate	1317-65-3	15	NA	6540	NA
Copper Compounds	7440-50-8	.1	.2	NA	NA
Pigments	Varies	NA	NA	NA	NA

---

## SECTION 3 - HAZARD IDENTIFICATION

---

Primary Route of Entry - Inhalation (dry form only), ingestion and dermal.

Hazards - May cause skin and eye irritation, Lung effects including cancer, silicosis

Silica, Crystalline (Quartz)

A single exposure will not result in serious adverse health effects.

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

Silicosis may be progressive; it may lead to disability and death. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. There are

some studies that show excess numbers of cases of scleroderma and other connective tissue disorders in workers exposed to respirable crystalline silica. Silicosis increases the risk of tuberculosis. Some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

#### Calcium Carbonate

Overexposure may result in irritation to eyes, skin and respiratory system. Chronic exposure may result in hyperclacemica, alkalosis, and renal impairment. Animal studies suggest that inhalation may enhance susceptibility to respiratory infection.

#### Copper or Copper Compounds

Overexposure can cause nausea, chills, diarrhea. May cause respiratory irritation, skin irritation (oxide pox), fever, eye irritation with redness, pain, and conjunctivitis; preexisting lung diseases may be aggravated by exposure. Could result in respiratory disease if over-exposed on a chronic basis.

#### Pigments (Stains)

Contains pigments which are produced from various metal salts, and/or other organic chemicals. Many of these pigments are in the form of spinel, which are formed by the reaction of these different metal salts at high temperature into essentially insoluble homogeneous pigment crystals. Spinel are considered of less hazardous than the individual metals they contain The pigments used may contain one or more of the following: silica (quartz), cobalt, vanadium, copper, iron, manganese, chromium and cadmium (encapsulated).

---

## **SECTION 4 - FIRST-AID MEASURES**

---

Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

---

## **SECTION 5 - FIRE-FIGHTING MEASURES**

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Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown

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## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

---

Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

## **SECTION 7 - HANDLING AND STORAGE**

---

Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

## **SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder	Percent Volatile - N/A
Explosive Properties - N/A	Vapor Density - N/A
Odor and Odor Threshold - N/A	Applicable Evaporation Rate - N/A
Partition Coefficient - N/A	Melting/Softening Point – None
pH - N/A	Freezing Point - N/A
Oxidizing Properties - N/A	Specific Gravity - N/A
Boiling Point - N/A	Flash Point - N/A
Solubility in Water - No	Flammable Limits - N/A
Vapor Pressure - N/A	Auto-Ignition Temperature - N/A

---

**SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown  
Hazardous Polymerization - None  
Hazardous Decomposition Products - None  
Conditions to Avoid - None  
Incompatibility – Unknown

---

**SECTION 11 - TOXICOLOGICAL INFORMATION**

---

Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

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**SECTION 12 - ECOLOGICAL INFORMATION**

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No specific information available.

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**SECTION 13 - DISPOSAL INFORMATION**

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Dispose according to local regulations. No specific information available.

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**SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

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Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

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**SECTION 16 - OTHER INFORMATION**

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Conforms to D 4236

No other specific information available.

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# MATERIAL SAFETY DATA SHEET

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## SECTION 1 - IDENTIFICATION OF SUBSTANCE & COMPANY PREPARING INFORMATION

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**Identity:** M-10 Seal Brown

**Manufacturer's Name:** Minnesota Clay

**Address:** 2960 Niagara Lane, Plymouth MN 55447

**Tel Phone:** (763) 432-0875

**Emergency Tel:** None

**Date Prepared:** July 29, 2011

**Replaces MSDS dated:** N/A

---

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

---

INGREDIENTS	CAS NUMBER	EXPOSURE LIMITS (mg/m <sup>3</sup> )		LD <sub>50</sub> mg/kg	LC <sub>50</sub> mg/m <sup>3</sup>
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risk of tuberculosis. Some studies that show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

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---

### **SECTION 4 - FIRST-AID MEASURES**

---

Inhalation - Remove from exposure.

Dermal - Wash skin with soap and water.

Eye - Flush eyes with large quantities of water for at least 15 minutes. If irritation is present after washing, contact a physician.

Ingestion- Do not induce vomiting, contact a physician.

---

### **SECTION 5 - FIRE-FIGHTING MEASURES**

---

Special Fire-Fighting Procedure - None

Unusual Fire or Explosion Hazards - None

Extinguishing Media - None

Hazardous Combustion Products –Unknown



---

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

---

Procedures for Leaks or Spills - place in suitable container, and provide adequate ventilation. Wear personnel protective equipment (Goggles, glove, personal protective clothing).

---

## **SECTION 7 - HANDLING AND STORAGE**

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Engineer Control – use adequate ventilation

Procedure/Equipment - no specific requirement. See personal protective equipment.

Work Practices - use with adequate ventilation, avoid skin, eye and inhalation contact, wash hands

Storage - Store in tightly closed container. Store in a cool well-ventilated area.

---

## **SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

---

Engineering Measures – provide adequate ventilation

Personal Protective Equipment - wear chemical safety goggles, protective chemical resistant gloves, appropriate protective clothing

---

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

Appearance - Powder

pH - N/A

Explosive Properties - N/A

Oxidizing Properties - N/A

Odor and Odor Threshold - N/A

Boiling Point - N/A

Partition Coefficient - N/A

Solubility in Water - No

Vapor Pressure - N/A

Freezing Point - N/A

Percent Volatile - N/A

Specific Gravity - N/A

Vapor Density - N/A

Flash Point - N/A

Applicable Evaporation Rate - N/A

Flammable Limits - N/A

Melting/Softening Point - None

Auto-Ignition Temperature - N/A

---

## **SECTION 10 - STABILITY AND REACTIVITY**

---

Stability - Unknown

Hazardous Polymerization - None

Hazardous Decomposition Products - None

Conditions to Avoid - None

Incompatibility – Unknown

---

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

---

Hazard to Humans - There is no toxicity data on this mixture. Likely to be a skin and eye irritant. Inhalation of dust may cause lung effects.

Animal Experiment - There is no toxicity data on this mixture

Acute – Likely to be a skin and eye irritant

Chronic/Other - Inhalation may cause lung effects. Contains quartz, which can cause silicosis and is a potential carcinogen.

---

## **SECTION 12 - ECOLOGICAL INFORMATION**

---

No specific information available.

---

**SECTION 13 - DISPOSAL INFORMATION**

---

Dispose according to local regulations. No specific information available.

---

**SECTION 14 - TRANSPORTATION INFORMATION**

---

No specific information available.

---

**SECTION 15 - REGULATORY INFORMATION**

---

Ingredients are listed on TSCA, DSL and EINECS inventories.

Quartz is listed on IARC, NTP, OSHA and/or Calif. Prop 65 cancer lists.

No specific other information available.

---

**SECTION 16 - OTHER INFORMATION**

---

Conforms to D 4236

No other specific information available.