

MATERIAL SAFETY DATA SHEET

Identification

V547 GRAY STAINLESS STEEL

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Section 1

Section 2 - Hazardous Ingredients

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Alumina non-fibrous	1344-28-1		10 mg/m ³	
Hazard Codes: Health - 1 Flammability - 1 Reactivity - 0 Personal - 0				

Section 3 - Physical / Chemical Characteristics

Boiling Point	Vapor Pressure	Vapor Density	Solubility in Water
Approx. 450 F	not available	not available	Insoluble
Specific Gravity (H ₂ O = 1)	Melting Point	Evaporation Rate (Butyl Acetate = 1)	Appearance and Odor
1.5-2.0	Not Available	not available	Grey bar, tallow or fat odor

Section 4 - Fire and Explosion Hazard Data

Flash Point	Flammable Limits	UEL
Not Available	No Data Available	Not Available
Special Fire Fighting Procedures	Unusual Fire and Explosion Hazards	LEL
Treat as grease fire, use air pack	Dense Smoke	Not Available
Extinguishing Media		
CO ₂ , Dry Chemical, Foam		

Section 5 - Reactivity Data

Stability (Stable or Unstable)	Conditions to Avoid
Stable	Avoid high heat, open flames
Incompatibility (Materials to Avoid)	Hazardous Decomposition or Byproducts
Do Not Expose To Strong Oxidizers	If combustion is incomplete, Carbon Monoxide will form
Hazardous Polymerization (May occur or Will Not occur)	
Will not occur	

Section 6 - Health Hazard Data

Routes of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	No	No
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No
Health Hazards (Acute and Chronic)			
Alumina: Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract			
Signs and Symptoms of Exposure			
Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract			
Medical Conditions Generally Aggravated by Exposure			
No data available			
Emergency and First Aid Care			
Remove to Fresh Air and Flush With Water			

Section 7 - Precautions for Safe Handling and Use

Steps To Be Taken In Case Material is Released Or Spilled	Waste Disposal Method
Scoop into waste container	Dispose in local landfill, in compliance with local, state and federal regulations.
Precautions To Be Taken In Handling And Storing	Other Precautions
Store at room temperature. Avoid excessive heat, open flame	After handling wash thoroughly

Section 8 - Control Measures

Respiratory Protection (Special Type)		
Use NIOSH/MSHA approved dust filter for exposure above permissible level, Mask Type 8710		
Ventilation	Local Exhaust	Special
	Sufficient to maintain employee exposure	None
	Mechanical (General)	Other
	below permissible level	None
Protective Gloves	Eye Protection	Other Protective Clothing Or Equipment
Yes	If exposure to dust is likely	Long sleeve shirt recommended
Work Hygienic Practices		
After handling wash thoroughly		

Information herein is given in good faith as authoritative and valid.
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Grace
Faxed
06-08-2011

MATERIAL SAFETY DATA SHEET

Identification

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TRIPOLI

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Section 1

Manufacturer's Name

Section 2 - Hazardous Ingredients

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Silica Quartz	14808-60-7		0.05 mg/m ³	respirable dust
Crystalline Tripoli	1317-95-9		0.1 mg/m ³	respirable dust
Hazard Codes:	Health - 1	Flammability - 1	Reactivity - 0	Personal - 0

Section 3 - Physical / Chemical Characteristics

Boiling Point	Vapor Pressure	Vapor Density	Appearance and Odor
450 F	not available	not available	Solid red bar- tallow or fat odor
Specific Gravity	Melting Point	Evaporation Rate (Butyl Acetate = 1)	Solubility in Water
2.65	Not Available	Not Available	Insoluble

Section 4 - Fire and Explosion Hazard Data

Flash Point	Flammable Limits	UEL	Extinguishing Media
Not Available	No Data Available	Not Available	CO ₂ , Dry Chemical, Foam
Special Fire Fighting Procedures	Unusual Fire and Explosion Hazards	LEL	
Treat as grease fire, use air pack	Dense Smoke	Not Available	

Section 5 - Reactivity Data

Stability (Stable or Unstable)	Conditions to Avoid
Stable	Avoid high heat, open flame
Incompatibility (Materials to Avoid)	Hazardous Decomposition or Byproducts
Do not expose to strong oxidizer	If combustion is incomplete, Carbon Monoxide may form
Hazardous Polymerization (May occur or Will Not occur)	
Will not occur	

Section 6 - Health Hazard Data

Routes of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	No	No
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	Yes; respirable silica content	Yes, group 1 agent	No
Health Hazards (Acute and Chronic)			
Silica Quartz (tripoli): Excessive inhalation of respirable dust may result in respiratory disease, including silicosis, pneumoconiosis, and pulmonary fibrosis. The International Agency for Research on Cancer (IARC) has determined that inhaled crystalline silica (quartz) is carcinogenic to humans, IARC Monographs 68 - Silica, Some Silicates, and Organic Fibres, June 1997. The National Toxicology Program (NTP) classifies crystalline silica as "known to be a human carcinogen", (9th Report on Carcinogens (2000)).			
Signs and Symptoms of Exposure			
Over exposure may cause temporary irritation of eyes, ears, nose, or respiratory tract.			
Medical Conditions Generally Aggravated by Exposure			
Condition of individuals with lung disease (e.g. bronchitis, emphysema) may be aggravated by exposure			
Emergency and First Aid Care			
Remove to Fresh Air and Flush With Water			

Section 7 - Precautions for Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled	Waste Disposal Method
Not Available	Dispose in local landfill, in compliance with local, state and federal regulations.
Precautions To Be Taken In Handling And Storing	Other Precautions
Store at room temperature. Avoid excessive heat, open flame.	After handling wash thoroughly

Section 8 - Control Measures

Respiratory Protection (Special Type)		
Use NIOSH/MSHA approved dust filter for exposure above permissible level, Mask Type 8710		
Ventilation	Local Exhaust	Special
	Sufficient to maintain employee exposure	None
	Mechanical (General)	Other
	below permissible level	None
Protective Gloves	Eye Protection	Other Protective Clothing Or Equipment
Yes	If exposure to dust is likely	Long sleeve shirt recommended
Work Hygienic Practices		
After handling wash thoroughly		

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MATERIAL SAFETY DATA SHEET

Identification

T18 GREASELESS

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Section 1

Emergency Telephone Number

Date Issued

Section 2 - Hazardous Ingredients

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Alumina	1344-28-1		10 mg/m ³	
Silica Amorphous	7631-86-9	6mg/m ³ TVWA (8-hr)		
Hazard Codes:	Health - 1	Flammability - 1	Reactivity - 0	Personal - 0

Section 3 - Physical / Chemical Characteristics

Boiling Point 212 F	Vapor Pressure not available	Vapor Density not available	Solubility in Water Softens
Specific Gravity (H ₂ O = 1) 3.0 - 4.0	Melting Point Not Available	Evaporation Rate (Butyl Acetate = 1) not available	Appearance and Odor Solid red bar

Section 4 - Fire and Explosion Hazard Data

Flash Point Not Available	Flammable Limits No Data Available	UEL Not Available
Special Fire Fighting Procedures Treat as grease fire, use air pack	Unusual Fire and Explosion Hazards Dense Smoke	LEL Not Available
Extinguishing Media CO ₂ , Dry Chemical, Foam		

Section 5 - Reactivity Data

Stability (Stable or Unstable) Stable	Conditions to Avoid Avoid high heat, open flames
Incompatibility (Materials to Avoid) Do Not Expose To Strong Oxidizers	Hazardous Decomposition or Byproducts If combustion is incomplete, Carbon Monoxide will form
Hazardous Polymerization (May occur or Will Not occur) Will not occur	

Section 6 - Health Hazard Data

Routes of Entry: Inhalation?	Yes	Skin?	No	Ingestion?	No
Carcinogenicity: NTP?	No	IARC Monographs?	No	OSHA Regulated?	No
Health Hazards (Acute and Chronic) Alumina: Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract					
Signs and Symptoms of Exposure Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract					
Medical Conditions Generally Aggravated by Exposure No data available					
Emergency and First Aid Care Remove to Fresh Air and Flush With Water					

Section 7 - Precautions for Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled Not Available	Waste Disposal Method Dispose in local landfill, in compliance with local, state and federal regulations.
Precautions To Be Taken In Handling And Storing Avoid excessive heat, open flame. May be stored at room temperature.	Other Precautions After handling wash thoroughly

Section 8 - Control Measures

Respiratory Protection (Special Type) Use NIOSH/MSHA approved dust filter for exposure above permissible level, Mask Type 8710	
Ventilation Local Exhaust Sufficient to maintain employee exposure	Special None
Mechanical (General) below permissible level	Other None
Protective Gloves Yes	Other Protective Clothing Or Equipment Long sleeve shirt recommended
Work Hygiene Practices After handling wash thoroughly	

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MATERIAL SAFETY DATA SHEET

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HF1 COLORING COMPOSITION

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Section 1

Section 2 - Hazardous Ingredients

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Alumina	1344-28-1		10 mg/m ³	
Hazard Codes:	Health - 1	Flammability - 1	Reactivity - 0	Personal - 0

Section 3 - Physical / Chemical Characteristics

Boiling Point 450 F	Vapor Pressure not available	Vapor Density not available	Solubility in Water Insoluble
Specific Gravity (H ₂ O = 1) 1.5-2.0	Melting Point Not Available	Evaporation Rate (Butyl Acetate = 1) not available	Appearance and Odor White solid bar - tallow or fat odor

Section 4 - Fire and Explosion Hazard Data

Flash Point Not Available	Flammable Limits No Data Available	UEL Not Available
Special Fire Fighting Procedures Treat as grease fire, use air pack	Unusual Fire and Explosion Hazards Dense Smoke	LEL Not Available
Extinguishing Media CO ₂ , Dry Chemical, Foam		

Section 5 - Reactivity Data

Stability (Stable or Unstable) Stable	Conditions to Avoid Avoid high heat, open flames
Incompatibility (Materials to Avoid) Do Not Expose To Strong Oxidizers	Hazardous Decomposition or Byproducts If combustion is incomplete, Carbon Monoxide will form
Hazardous Polymerization (May occur or Will Not occur) Will not occur	

Section 6 - Health Hazard Data

Routes of Entry: Inhalation? Yes	Skin? No	Ingestion? No
Carcinogenicity: NTP? No	IARC Monographs? No	OSHA Regulated? No
Health Hazards (Acute and Chronic) Alumina: Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract		
Signs and Symptoms of Exposure Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract		
Medical Conditions Generally Aggravated by Exposure No data available		
Emergency and First Aid Care - Remove to Fresh Air and Flush With Water		

Section 7 - Precautions for Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled Not Available	Waste Disposal Method Dispose in local landfill, in compliance with local, state and federal regulations.
Precautions To Be Taken In Handling And Storing Store at room temperature. Avoid excessive heat, open flame	Other Precautions After handling wash thoroughly

Section 8 - Control Measures

Respiratory Protection (Special Type) Use NIOSH/MSHA approved dust filter for exposure above permissible level, Mask Type 8710		
Ventilation Local Exhaust Sufficient to maintain employee exposure	Special None	
Mechanical (General) below permissible level	Other None	
Protective Gloves Yes	Eye Protection If exposure to dust is likely	Other Protective Clothing Or Equipment Long sleeve shirt recommended
Work Hygiene Practices After handling wash thoroughly		

MATERIAL SAFETY DATA SHEET

Identification

Z250 COLORING COMPOSITION

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Section 1

Section 2 - Hazardous Ingredients

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Alumina, non-fibrous	1344-28-1		10 mg/m ³	
Chromium (III) Oxide	1308-38-9	1 mg/m ³	0.5 mg/m ³	
Hazard Codes:	Health - 1	Flammability - 1	Reactivity - 0	Personal - 0

Section 3 - Physical / Chemical Characteristics

Boiling Point 450 F	Vapor Pressure not available	Vapor Density not available
Specific Gravity (H ₂ O = 1) 1.5-2.0	Melting Point Not Available	Evaporation Rate (Butyl Acetate = 1) not available
Solubility in Water Insoluble	Appearance and Odor Solid green bar- tallow or fat odor	

Section 4 - Fire and Explosion Hazard Data

Flash Point Not Available	Flammable Limits No Data Available	UEL Not Available
Special Fire Fighting Procedures Treat as grease fire, use air pack	Unusual Fire and Explosion Hazards Dense Smoke	LEL Not Available
Extinguishing Media CO ₂ , Dry Chemical, Foam		

Section 5 - Reactivity Data

Stability (Stable or Unstable) Stable	Conditions to Avoid Avoid high heat, open flames
Incompatibility (Materials to Avoid) Do Not Expose To Strong Oxidizers	Hazardous Decomposition or Byproducts If combustion is incomplete, Carbon Monoxide will form
Hazardous Polymerization (May occur or Will Not occur) Will not occur	

Section 6 - Health Hazard Data

Routes of Entry: Inhalation? Yes	Skin? No	Ingestion? No
Carcinogenicity: NTP? No	IARC Monographs? No	OSHA Regulated? No
Health Hazards (Acute and Chronic) Alumina: Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract		
Signs and Symptoms of Exposure Over exposure may cause temporary irritation of eyes, ears, nose, and respiratory tract		
Medical Conditions Generally Aggravated by Exposure No data available		
Emergency and First Aid Care Remove to Fresh Air and Flush With Water		

Section 7 - Precautions for Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled Scoop into waste container	Waste Disposal Method Dispose in local landfill, in compliance with local, state and federal regulations.
Precautions To Be Taken In Handling And Storing Store at room temperature. Avoid excessive heat, open flame	Other Precautions After handling wash thoroughly

Section 8 - Control Measures

Respiratory Protection (Special Type) Use NIOSH/MSHA approved dust filter for exposure above permissible level (N95 Particulate Respirator)		
Ventilation	Local Exhaust Sufficient to maintain employee exposure	Special None
	Mechanical (General) below permissible level	Other None
Protective Gloves Yes	Eye Protection If exposure to dust is likely	Other Protective Clothing Or Equipment Long sleeve shirt recommended
Work Hygienic Practices After handling wash thoroughly		

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MATERIAL SAFETY DATA SHEET

ABH GREASE STICK

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Section 1

Address	E-Product Name	Date Issued
	Material Name for Information	2000/01/14
		Last Revision
		11/20/1999

Section 2 - Hazardous Ingredients

INGREDIENT	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER RECOMMENDED LIMITS
Paraffin wax fumes (byproduct of mixture use)			2 mg/m ³	
Hazard Codes:	Health - 1	Flammability - 1	Reactivity - 0	Personal - 0

Section 3 - Physical / Chemical Characteristics

Boiling Point	Vapor Pressure	Vapor Density	Solubility in Water
450 F	not available	not available	Insoluble
Specific Gravity	Melting Point	Evaporation Rate (Butyl Acetate = 1)	Appearance and Odor
< 1	Not Available	Not Available	Solid bar- tallow or fat odor

Section 4 - Fire and Explosion Hazard Data

Flash Point	Flammable Limits	UEL	LEL
Not Available	No Data Available	Not Available	Not Available
Special Fire Fighting Procedures	Unusual Fire and Explosion Hazards	Extinguishing Media	
Treat as grease fire, use air pack	Dense Smoke	CO ₂ Dry Chemical, Foam	

Section 5 - Reactivity Data

Stability (Stable or Unstable)	Conditions to Avoid
Stable	Avoid high heat, open flame
Incompatibility (Materials to Avoid)	Hazardous Decomposition or Byproducts
Do not expose to strong oxidizer	If combustion is incomplete, Carbon Monoxide may form
Hazardous Polymerization (May occur or Will Not occur)	
Will not occur	

Section 6 - Health Hazard Data

Route of Entry	Inhalation?	Skin?	Ingestion?
	Yes	No	No
Carcinogenicity	NTP?	IARC Monographs?	OSHA Regulated?
	Probable	Yes, group 1 agent	No
Health Hazards (Acute and Chronic)			
At temperature above 600°F fumes may occur, and cause dizziness and nausea due to overexposure.			
Signs and Symptoms of Exposure			
Over exposure may cause temporary irritation of eyes, ears, nose, or respiratory tract.			
Medical Conditions Generally Aggravated by Exposure			
No data available			
Emergency and First Aid Care			
Remove to Fresh Air and Flush With Water			

Section 7 - Precautions for Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled	Waste Disposal Method
Scoop into waste container	Dispose in local landfill, in compliance with local, state and federal regulations.
Other Precautions	Precautions To Be Taken In Handling And Storing
After handling wash thoroughly	Store at room temperature. Avoid excessive heat, open flame

Section 8 - Control Measures

Respiratory Protection (Special Type)	
Use NIOSH/MSHA approved dust filter for exposure above permissible level, Mask Type 8710	
Ventilation	Local Exhaust
	Sufficient to maintain employee exposure
	Mechanical (General)
	below permissible level
Protective Gloves	Eye Protection
Yes	If exposure to dust is likely
Work Hygienic Practices	Other Protective Clothing Or Equipment
After handling wash thoroughly	Long sleeve shirt recommended

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