

MATERIAL SAFETY DATA SHEET

(Approved by U. S. Department of Labor. "Essentially Similar" to Form LSB-00S-4)

OSHA 29 CFR 1910.1200-1

FOR METAL CASTING SUPPLIES

N/A - Not applicable

UNK - Unknown

SECTION 1 - SOURCE AND NOMENCLATURE

MANUFACTURER'S NAME The Hill and Griffith Company	EMERGENCY TELEPHONE NO. Area Code 513 Number 921-1075
ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE) 262 State Avenue, Cincinnati, Ohio 45204	CODE NO., TRADE NAME, SYNONYMS Zircon #1 Core & Mold Wash
CHEMICAL NAME AND SYNONYMS Putty type proprietary - Zirconium Silicate, Clay, Acrylic Resin ethyl Carbitol, wetting and anti-foam agents & water	
CHEMICAL FAMILY Complex	
TYPICAL USES (CHECK APPROPRIATE ONES):	

Binders (Curing) Binders (Non-Curing) Additives Partings Facings Metal Additives
Castables and Exothermics Others Refractory Coating

SECTION 2 - HAZARDOUS INGREDIENTS

MATERIAL OR INGREDIENT IN PRODUCT: (AS IN CONTAINER BEFORE USE):	ESTABLISHED OSHA STANDARD TLV (UNITS) ETC.	LD ₅₀		LC ₅₀	SPECIES TESTED
		ORAL	SKIN	INHALATION	
Product shipped in plastic or putty form.					
After use will be converted to dry powder					
form. Consider refractories in same					
classification as nuisance dust.	10mg/M ³				

REMARKS: (CAN BE USED TO STATE THAT ENTIRE PRODUCT IS NON-HAZARDOUS BY OSHA DEFINITION):

SECTION 3 - PHYSICAL DATA

	ENTIRE PRODUCT	OR INGREDIENT (NAME)	
Boiling Point (°F.)	212°F	Water	Vapor Pressure (mmHg) N/A
Boiling Point (°F.) (Give Method)		32°F - Water	Vapor Density (Air = 1) N/A
Specific Gravity (Water = 1)	> 1		Evaporation Rate (= 1) N/A
Solubility in Water (Product)			Volatile _____ % Vol. _____ % Wt.
Reactivity (Inits)	100% water miscible		Negligible @ 70°F
Appearance (Product)	White/soft putty		Other:
Odor (Product)	Earthy/sweet		

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT N/A °F. _____ °C.	FLAMMABLE EXPLOSIVE LIMITS Name: Entire product	LOWER UNK	UPPER UNK
EXTINGUISHING MEDIA: None required in existing form.			
FIRE FIGHTING PROCEDURES: None required in existing form.			
ADDITIONAL FIRE AND EXPLOSION HAZARDS: None required in existing form.			

PLAINTIFF'S EXHIBIT

H&G-28

JNV

Possible eye, skin & respiratory

PRINCIPAL ROUTES OF ABSORPTION	NAME ROUTE	NAME TOXIC INGREDIENTS
	Inhalation	Possible fumes from acrylic resin

POSSIBLE SYMPTOMS OF OVEREXPOSURE: (CHEMICAL NAME AND CORRESPONDING SYMPTOMS)

Harmful if ingested

CHRONIC EFFECTS:

NK

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove from exposure area to fresh air Ingestion: Call physician.
 Skin Contact: Soap and water wash Other:
 Eye Contact: Flush with copious quantities of water - call physician

SECTION 6 - REACTIVITY DATA

STABILITY (CHECK ONE) CONDITIONS TO AVOID:

Stable ☒ X

Unstable

COMPATIBILITY (MATERIALS TO AVOID):

In case of fire in or near storage area steam generation is possible.

HAZARDOUS DECOMPOSITION PRODUCTS:

NK - Incomplete combustion might yield carbon monoxide.

HAZARDOUS POLYMERIZATION (CHECK ONE):

Will Not Occur

☒ X

Might Occur

CONDITIONS TO AVOID:

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Product is shipped in plastic form. If spill occurs in use form (cut back with water
 or slurry form) dike spill area with inert material such as sand.

BEST DISPOSAL METHOD:

Move waste collection to approved land fill.

SECTION 8 - SPECIAL PROTECTION INFORMATION

MITIGATION REQUIREMENTS:

Local Exhaust Recommended.

Mechanical Exhaust Recommended for pouroff & shake out

areas.

Personal Protective Equipment None required.

PROTECTIVE EQUIPMENT (SPECIFY TYPES):

Eye Safety goggles or face shield

Gloves Rubber or neoprene recommended.

Respiratory NIOSH approved in pouroff & shake out areas

SECTION 9 - SPECIAL PRECAUTIONS

CAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Maintain storage area above freezing.

OTHER PRECAUTIONS:

None required.

FOR REFERENCE ONLY

OBSOLETE

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5/28/85

SIGNATURE:

Victor S. LaFay

TITLE:

STAFF CHEMIST

MATERIAL SAFETY DATA SHEET

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May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

N.A. = NOT APPLICABLE

N.E. = NOT ESTABLISHED

I. PRODUCT IDENTIFICATION

PRODUCT NAME (s): #1 Zircon Core & Mold Wash

Manufacturer: Hill and Griffith Co.
Address: 1262 State Avenue
Cincinnati, Ohio 45204

TELEPHONE: (800) 543-0425
Hours: 8:00 A.M. - 5:00 P.M.
Fax: 513-921-9180

II. HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

CATEGORY	RATING	LEGEND
Flammability	0	0=Minimal Hazard
Health	1	1=Slight Hazard
Reactivity	0	0=Minimal Hazard
Personal Protection	B	B=Glasses and Gloves

III. HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS.NO	ACGIH THRESHOLD LIMIT VALUE	% RANGE	OSHA PERMISSABLE EXPOSURE LIMIT
Zircon	7440-67-2	5 mg/m3	70-80	5 mg/m3

* As respirable dust

@ This material contains Silicon Dioxide in some form. IARC Monographs on the evaluation of the Carcinogenic Risk of Chemicals to Humans (Volume 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity of crystalline silica to humans.

Classified by the IARC as 2A

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FOR CHEMICAL EMERGENCY, SPILL,
LEAK, EXPOSURE OR ACCIDENT CALL
CHEMTREC DAY OR NIGHT AT
1-800-424-9300

IV. PHYSICAL/CHEMICAL PROPERTIES

Appearance and Odor: White-soft putty. Earthy-sweet smell.

Water Solubility: 100% misc.

Melting Point(oF): 32

Boiling Range(oF): 212

Specific Gravity(water=1): >1

Vapor Pressure(mmHg): na

Percent Volatile By Weight: neg

Vapor Density(Air=1): na

Evaporation Rate(Butyl Acetate=1): na

TPQ: na

RQ: na

V. FIRE AND EXPLOSION INFORMATION

Flash Point(C.O.C.)(oF): na

Auto-Ignition Temperature(oF): na

Flammable Limits: LEL na UEL na

Extinguishing Media: Product is considered non combustible.

Unusual Fire or Explosion Hazards: None

Special Fire-Fighting Procedures: Use full facepiece with self contained breathing apparatus when fighting fires near this product

VI. CHEMICAL REACTIVITY INFORMATION

Conditions Contributing to Instability: None.

Incompatible Materials: N.E.

Conditions to Avoid: Storage in extreme cold.

Hazardous Decomposition Products: Carbon monoxide and water vapor. May produce oxides of sulfur & nitrogen.

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Product Name: #1 Zircon Core & Mold Wash

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VII. HEALTH HAZARDS A. Summary/Risks

Signs and Symptoms of Overexposure: Overexposure to the skin could result in minor skin irritations including redness or itching.

Medical Conditions Generally Aggravated by Exposure: May aggravate pre-existing medical conditions

Primary Route(s) of Entry: Skin Contact.

Target Organs: Eyes and Skin.

Acute Health Effect: Overexposure could result in mild skin irritations that are reversible.

Chronic Health Effect: e

Carcinogenicity: This product is not considered a carcinogen by the ACGIH, NTP, IARC, or OSHA.

Notes to Physician: None.

VII. HEALTH HAZARDS B. FIRST AID/EMERGENCY PROCEDURES

Inhalation: If overcome, immediately remove from exposure and seek medical attention

Skin Contact/Absorption: Wash skin thoroughly with soap and water. If irritation develops, seek medical attention

Eye Contact: Flush with clear flowing water for at least 15 minutes. If irritation persists, seek medical attention.

Ingestion: If ingested, DO NOT induce vomiting; call a physician immediately.

VIII. SPILL, LEAK AND WASTE DISPOSAL PROCEDURES

Procedures for clean-up of spills/leaks: on as possible. Scoop up or clean up using best means possible. Water may be used to clean area. Notify proper authorities if the need exists.

Contain spill

Waste Disposal: Waste generated during application, demolition, breakage or spillage are not hazardous wastes as defined by RCRA (40 CFR part 261). Place waste and spillage in closed containers. Dispose of in approved landfill in accordance with federal, state and local regulations.

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IX. PROTECTION AND CONTROL INFORMATION

Hygeinic Practices: Minimize breathing vapors, mists, fumes or dusts. Avoid prolonged or repeated contact with skin. Remove contaminated clothes launder before reuse. Remove contaminated shoes; clean before reuse.

Ventilation Requirements: Provide ventilation sufficient to prevent exceeding recommended exposure limits.

Respiratory Protection: Use NIOSH approved organic cartridge Type 7 respirator

Eye Protection: Use safety glasses, splash goggles or face shield when eye contact may occur

Protective Gloves: Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact

Other Clothing and Equipment: As required to prevent contact

Engineering Controls/Work Practices: Keep containers and storage containers closed when not in use.

Special Considerations for Repair/Maintenance of Contaminated Equipment: Provide adequate respiratory, eye and skin protection.

X. PRECAUTIONS FOR SAFE HANDLING AND USE

Storage Segregation: Always segregate materials by major hazard class.

Special Handling/Storage: Do not transfer contents to unlabeled container(s).

Other: Comply with all federal, state and local regulations.

XI. DOT SHIPPING REQUIREMENTS

Shipping Name: Paint Compounds

Hazard Class: None.

Identification Number: None

Label(s) Required: None.

Date Prepared: 04-16-1990

Prepared by: Steve Neltner

Title : Lab Manager

As of the date of preparation of this document, the forgoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state law(s). However, no warranty or representation with respect to such information is intended or given.
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