



Hill and Griffith Company Material Safety Data Sheet

PLAINTIFF'S EXHIBIT

H&G-73

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): Zircon #1 Core Wash

Manufacturer: The Hill & Griffith Co.

Address: 1085 Summer Street
Cincinnati, Ohio 45204

Telephone: (513) 921-1075

Fax: (513) 921-9180

EMERGENCY

TELEPHONE: (800) 424-9300

Call Chemtrec

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

- These ratings are based on NFPA regulations

III. HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS.NO.	ACGIH THRESHOLD LIMIT VALUE	% RANGE	OSHA PERMISSIBLE EXPOSURE LIMIT
Zircon	7440-67-7	5 mg/m ³	70-80	5 mg/m ³
Inert Nuisance Dusts	Mixture	10 mg/m ³	1-5	15 mg/m ³
• As respirable dust				

This material contains crystalline silica. The International Agency for Research on Cancer (IARC) Monograph Silica. Some Silicates and Organic Fibres (Volume 68, 1997) has determined that crystalline silica in the form of quartz or cristobalite from occupational exposures, if inhaled, is carcinogenic to humans (IARC Group 1). Prolonged inhalation of silica dust may result in silicosis, a progressive, disabling, and sometimes fatal, lung disease. Avoid creating dusty conditions and use a NIOSH/MSHA approved dust respirator when Threshold limit Values (TLVs) may be exceeded.

PRINTED IN U.S.A.

HG-000168

000167

IV. PHYSICAL/CHEMICAL PROPERTIES

Appearance and Odor: White thick paste, low odor.

Water Solubility: Miscible.

Melting Point(°F): 32

Boiling Range(°F): 212

Specific Gravity(water=1): > 1

Vapor Pressure(mmHg): 760

Percent Volatile By Weight: NE

Vapor Density(Air=1): NE
TPQ: NA

Evaporation Rate(Butyl Acetate=1): < 1
RQ: NA

V. FIRE AND EXPLOSION INFORMATION

Flash Point(C.O.C.)(°F): NA

Auto-Ignition Temperature(°F): NA

Flammable Limits: LEL: NA UEL: NA

Extinguishing Media: Not applicable.

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: Strong acids or oxidizers.

Conditions to Avoid: None.

Hazardous Decomposition Products: Possible dusts could be generated, but not likely.

PRINTED IN U.S.A.

VII. HEALTH HAZARDS A. Summary/Risks

Signs and Symptoms of Overexposure: Eyes- irritation with redness and swelling; Skin- may irritate; Inhalation- may cause coughing and sneezing.

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

Primary Route(s) of Entry: Inhalation, skin contact, and ingestion.

Target Organs: Eyes, lungs, and skin.

Acute Health Effect: Overexposure could lead to skin irritations and lung or mucous membrane irritation.

Chronic Health Effect: Overexposure could lead to severe damage to skin, eyes, lungs, or mucous membranes.

Carcinogenicity: See page 1. In the report the National Toxicology Program (NTP) classified respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, as *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a casual relationship between exposure to respirable crystalline silica dust. In addition, the American Conference of Governmental Industrial Hygienists (ACGIH) has classified crystalline silica-quartz as an *A2 Suspected Human Carcinogen*.

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: Stop spill as soon 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.

Waste Disposal: Waste generated during application, demolition, breakage or spillage may be 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.

PRINTED IN THE U.S.A.

IX. PROTECTION AND CONTROL INFORMATION

Hygienic 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 fine particulate respirator if permissible exposure limits or threshold limit values are exceeded or if the user deems necessary.

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(s): Any Packaging

Compound, Thermal Insulating

Date Prepared: 05/08/01

Supersedes: 11/25/97

Print Date: 05/08/01

Prepared by: Lori R. Yeager

Title: Corporate Government Regulatory 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.

PRINTED IN U.S.A.

the HILL and GRIFFITH Company

1262 State Avenue
Cincinnati, Ohio 45204

HANDLING

1. Harmful if ingested.
2. Protect product from freezing.
3. Should product be involved with fire — in complete combustion could yield Carbon Monoxide and fumes of Petroleum Resin.

2931 Seventh Avenue - North
Birmingham, Alabama 35202

4606-10 West 16th Street
Chicago, Illinois 60650

FIRST AID

Depot Street
Burbank, Ohio 44214

1. If ingested — call Physician — Do Not induce vomiting.
2. Eye contact — flush with water — call Physician.
3. Prolonged inhalation of fumes from fire — remove victim to fresh air — call Physician.
4. Soap & water wash after skin contact.

#1 ZIRCON

CORE and MOLD WASH

HG 168

FOR INDUSTRIAL USE ONLY

Serving the CAST METAL INDUSTRY Since 1896

HG-000172

000171



Quality and Service Since 1898

HILL and GRIFFITH Company



FIRE	0
HEALTH	2
REACTIVITY	0
PERSONAL PROTECTION	B

S-ZIRCON CORE WASH #1

PART NUMBER

9587

LOT #

CAUTION: KEEP FROM FREEZING
FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN

NET: 66 LBS.

SHIPPING NAME:
COMPOUND, THERMAL INSULATING

WARNING STATEMENTS

HAZARD:

HAZARDOUS IF SWALLOWED. MAY CAUSE IRRITATION IN SUSCEPTIBLE INDIVIDUALS. IRRITATION OF SKIN, EYES, MUCOUS MEMBRANES CAN RESULT FROM CONTACT WITH THIS PRODUCT. THIS MATERIAL CONTAINS FREE CRYSTALLINE SILICA. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) MONOGRAPHY "SILICA, SOME SILICATES AND ORGANIC SILICATES" (VOL. 61, 1987) HAS DETERMINED THAT CRYSTALLINE SILICA IN THE FORM OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL EXPOSURES, IF INHALED, IS CARCINOGENIC TO HUMANS (IARC GROUP 1). PROLONGED INHALATION OF SILICA DUST MAY RESULT IN SILICOSIS, A PROGRESSIVE, DISABLING, AND SOMETIMES FATAL, LUNG DISEASE. AVOID CREATING DUSTY CONDITIONS AND USE A NIOSH/MSHA APPROVED DUST RESPIRATOR WHEN THRESHOLD LIMIT VALUES (TLVs) ARE EXCEEDED.

FIRST AID:

(EYES) - FLUSH WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES. (SKIN) - WASH WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES. (INGESTION) - DO NOT INDUCE VOMITING. CALL A PHYSICIAN IMMEDIATELY. (INHALATION) - REMOVE TO FRESH AIR. ADMINISTER OXYGEN IF BREATHING IS DIFFICULT. IN ALL CASES ABOVE, IF PROBLEM PERSISTS SEEK MEDICAL ATTENTION.

HANDLING:

WASH THOROUGHLY AFTER HANDLING. AVOID CONTACT WITH EYES OR PROLONGED SKIN CONTACT. STORE AWAY FROM HEAT SOURCES, PREFERABLY AT ROOM TEMPERATURE. DO NOT TRANSFER TO UNMARKED CONTAINERS. DO NOT PNEUMATIZE OR REUSE THIS CONTAINER. SAFETY GLASSES AND GLOVES ARE RECOMMENDED WHEN HANDLING THIS PRODUCT. READ PRODUCT LITERATURE AND MATERIAL SAFETY DATA SHEET BEFORE USE.

DISPOSAL:

SMALL SPILLS CAN BE COLLECTED BY SCOPPING UP AND WASHING CONTAMINATED AREA WITH SOAP AND WATER. LARGE SPILLS SHOULD BE CONTAINED AND KEPT OUT OF SEWERS, DRAWS AND WATER SOURCES. CLEAN UP BY SHOVEL AND WASH AREA WITH SOAP AND WATER. NOTIFY PROPER AUTHORITIES IF THE NEED EXISTS.

HAZARDOUS INGREDIENTS AND CAS NUMBERS

7440-67-7

ZIRCON
AS RESPIRABLE DUST

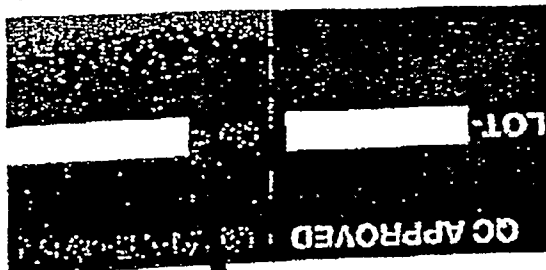


9587

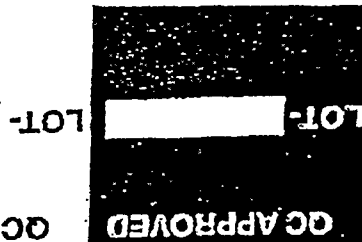
3637 Farnsworth Avenue • Indianapolis, IN 46241 • Sales Central-Cincinnati 1-800-543-0425 • Sales Central-Indianapolis 1-800-428-3102

HG-000173

000172



QC APPROVED



S-ZIRCON CORE WASH #1
PRODUCT

LOT NO.

