SAFETY DATA SHEET



1. Identification

Product identifier HARMIX CU (WET)

Other means of identification

Brand Code 2150

Recommended use For Industrial Use Only

Recommended restrictionsUsers should be informed of the potential presence of respirable dust and respirable crystalline

silica as well as their potential hazards. Appropriate training in the proper use and handling of this

material should be provided as required under applicable regulations.

Manufacturer/Supplier information

Manufacturer

Company name HarbisonWalker International

Address 1305 Cherrington Parkway, Suite 100

Moon Township, Pennsylvania 15108 US

Telephone General Phone: 412-375-6600

Website www.thinkHWI.com

Emergency phone number CHEMTREC 24 HOUR 1-800-424-9300

EMERGENCY #

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity Category 1A

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May cause cancer.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Wear protective gloves/protective clothing/eye protection.

Response If concerned: Get medical advice/attention.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information Users should be informed of the potential presence of respirable dust and respirable crystalline

silica as well as their potential hazards. Overexposure to the respirable dust of crystalline silica (quartz or cristobalite, less than or equal to 5 microns in size) may lead to silicosis in humans, which is a progressive and irreversible lung disease. Appropriate training in the proper use and

handling of this material should be provided as required under applicable regulations.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------------|--------------------------|------------|---------|
| Aluminium Oxide (Non-Fibrous) | | 1344-28-1 | 60 - 80 |
| SILICON CARBIDE | | 409-21-2 | 10 - 20 |

Material name: HARMIX CU (WET)

| Chemical name | Common name and synonyms | CAS number | % | |
|-----------------------------------|--------------------------|------------|----------|--|
| Kaolin | | 1332-58-7 | 2.5 - 10 | |
| Quartz (SiO2) | | 14808-60-7 | 2.5 - 10 | |
| Titanium Dioxide | | 13463-67-7 | 0.1 - 1 | |
| Other components below reportable | levels | | 2.5 - 10 | |

^{*}Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Wash off with soap and water. Get medical attention if irritation develops and persists. Skin contact Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists. Eye contact

Ingestion Rinse mouth. Get medical attention if symptoms occur. Dusts may irritate the respiratory tract, skin and eyes. Most important

symptoms/effects, acute and

delayed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

Indication of immediate medical attention and special treatment needed

General information

If concerned: Get medical advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Specific hazards arising from

the chemical

Special protective equipment and precautions for firefighters Use fire-extinguishing media appropriate for surrounding materials.

Not available.

Not applicable.

Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not breathe dust. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

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8. Exposure controls/personal protection

Occupational exposure limits

| Components | for Air Contaminants (29 CFR 1910.1000) Type | Value | Form |
|---|--|----------------------------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | PEL | 5 mg/m3 | Respirable fraction. |
| , | | 15 mg/m3 | Total dust. |
| Kaolin (CAS 1332-58-7) | PEL | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| SILICON CARBIDE (CAS 409-21-2) | PEL | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| Titanium Dioxide (CAS 13463-67-7) | PEL | 15 mg/m3 | Total dust. |
| US. OSHA Table Z-3 (29 CF Components | ·R 1910.1000) Type | Value | Form |
| Quartz (SiO2) (CAS 14808-60-7) | TWA | 0.3 mg/m3 | Total dust. |
| , | | 0.1 mg/m3 | Respirable. |
| | | 2.4 mppcf | Respirable. |
| US. ACGIH Threshold Limi | t Values | | |
| Components | Туре | Value | Form |
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 1 mg/m3 | Respirable fraction. |
| Kaolin (CAS 1332-58-7) | TWA | 2 mg/m3 | Respirable fraction. |
| Quartz (SiO2) (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |
| Titanium Dioxide (CAS 13463-67-7) | TWA | 10 mg/m3 | |
| US. NIOSH: Pocket Guide t | to Chemical Hazards | | |
| Components | Туре | Value | Form |
| Kaolin (CAS 1332-58-7) | TWA | 5 mg/m3 | Respirable. |
| | | 10 mg/m3 | Total |
| Quartz (SiO2) (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |
| SILICON CARBIDE (CAS 409-21-2) | TWA | 5 mg/m3 | Respirable. |
| | | 10 mg/m3 | Total |
| logical limit values | No biological exposure limits noted for the in | ngredient(s). | |
| oosure guidelines | Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. | | |
| propriate engineering atrols | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. | | |
| ividual protection measures | s, such as personal protective equipment | - | |
| Eye/face protection | Chemical respirator with organic vapor cartri | idge, full facepiece, dust | and mist filter. |
| Skin protection | | | |
| Hand protection | Wear appropriate chemical resistant gloves. | | |
| = | Wear appropriate chemical resistant gloves. Use of an impervious apron is recommended | | |

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Solid.
Form Solid

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling Not available.

range

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Not available.

Flammability limit - upper

(%)

Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

/apor pressure Not available.

Vapor pressureNot available.Vapor densityNot available.Relative densityNot available.

Solubility(ies)

Solubility (water)

Partition coefficient
(n-octanol/water)

Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoidContact with incompatible materials.

Incompatible materials Acids. Chlorine.

Incompatibility is based strictly upon potential theoretical reactions between chemicals and may

not be specific to industrial application exposure. Contact your sales representative for

clarification.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Dust may irritate respiratory system. Prolonged inhalation may be harmful.

Skin contact Dust or powder may irritate the skin.

Eye contact Dust may irritate the eyes.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity Not available.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation. **Serious eye damage/eye** Direct contact with eyes may cause temporary irritation.

Serious eye damage/ey

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica

inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and

respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (SiO2) (CAS 14808-60-7) 1 Carcinogenic to humans.

Titanium Dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Quartz (SiO2) (CAS 14808-60-7) Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicityThis product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

EcotoxicityThe product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

potential, endocrine disruption, global warming potential) are expected from this component.

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13. Disposal considerations

Disposal instructions

This product, in its present state, when discarded or disposed of, is not a hazardous waste

according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria

for hazardous waste.

Hazardous waste code

Waste from residues / unused No

products

Not applicable.

Contaminated packaging Not available.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Not applicable.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulationsThis product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200. All chemical substances in this product are listed on the TSCA

chemical substance inventory where required.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No

Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No

chemical

SARA 313 (TRI reporting)

| Chemica | I name | CAS number | % by wt. | |
|-----------|-----------------------|------------|----------|--|
| Aluminiur | n Oxide (Non-Fibrous) | 1344-28-1 | 60 - 80 | |

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)

Kaolin (CAS 1332-58-7)

Quartz (SiO2) (CAS 14808-60-7) SILICON CARBIDE (CAS 409-21-2) Titanium Dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)

Kaolin (CAS 1332-58-7)

Quartz (SiO2) (CAS 14808-60-7) SILICON CARBIDE (CAS 409-21-2) Titanium Dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)

Kaolin (CAS 1332-58-7)

Quartz (SiO2) (CAS 14808-60-7) SILICON CARBIDE (CAS 409-21-2) Titanium Dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Inventory name

Quartz (SiO2) (CAS 14808-60-7) Listed: October 1, 1988 Titanium Dioxide (CAS 13463-67-7) Listed: September 2, 2011

International Inventories

Country(a) or region

| Country(s) or region | inventory name | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| | | |

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-29-2015

Version # 01

United States & Puerto Rico

Disclaimer This information is based on our present knowledge on creation date. However, this shall not

Toxic Substances Control Act (TSCA) Inventory

constitute a guarantee for any specific product features and shall not establish a legally valid

contractual relationship.

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Yes

On inventory (yearlne)*