

1. Identification

Product identifier SHAMROCK 30 RAM (WM-7639)
Other means of identification
Brand Code 132C
Recommended use For Industrial Use Only
Recommended restrictions Avoid dry cutting, blasting, or dust generation.

Manufacturer/Importer/Supplier/Distributor 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 Not available.

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Skin corrosion/irritation Category 1A
 Serious eye damage/eye irritation Category 1
 Carcinogenicity Category 2
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Danger
Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage. Suspected of causing cancer.
Precautionary statement
Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.
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 None.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------------|--------------------------|------------|---------|
| Aluminium Oxide (Non-Fibrous) | | 1344-28-1 | 60 - 80 |
| Chromium (III) oxide | | 1308-38-9 | 20 - 40 |

| Chemical name | Common name and synonyms | CAS number | % |
|--|--------------------------|------------|----------|
| Orthophosphoric Acid | | 7664-38-2 | 2.5 - 10 |
| Other components below reportable levels | | | 2.5 - 10 |

4. First-aid measures

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|---|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| Most important symptoms/effects, acute and delayed | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed. |
| General information | IF exposed or concerned: Get medical advice/attention. |

5. Fire-fighting measures

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|--|---|
| Suitable extinguishing media | Use fire-extinguishing media appropriate for surrounding materials. |
| Unsuitable extinguishing media | Not available. |
| Specific hazards arising from the chemical | Not applicable. |
| Special protective equipment and precautions for firefighters | Not available. |

6. Accidental release measures

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| 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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p> |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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|---|---|
| Precautions for safe handling | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). |

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value | Form |
|---|------|-----------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | PEL | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| Chromium (III) oxide (CAS 1308-38-9) | PEL | 0.5 mg/m3 | |
| Orthophosphoric Acid (CAS 7664-38-2) | PEL | 1 mg/m3 | |

US. OSHA Table Z-3 (29 CFR 1910.1000)

| Components | Type | Value | Form |
|---|------|----------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|---|------|-------------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 1 mg/m3 | Respirable fraction. |
| Chromium (III) oxide (CAS 1308-38-9) | TWA | 0.003 mg/m3 | Inhalable fraction. |
| Orthophosphoric Acid (CAS 7664-38-2) | STEL | 3 mg/m3 | |
| | TWA | 1 mg/m3 | |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|--------------------------------------|------|-----------|
| Chromium (III) oxide (CAS 1308-38-9) | TWA | 0.5 mg/m3 |
| Orthophosphoric Acid (CAS 7664-38-2) | STEL | 3 mg/m3 |
| | TWA | 1 mg/m3 |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Zirconium silicates (zircon sands) contain trace amounts (106-120 pCi/g) of naturally occurring radioactive uranium and thorium. Overexposure by inhalation to respirable dust containing uranium and thorium may cause lung cancer. Eye contact with the dust may cause eye irritation. Measurements made by Dupont during the use of a similar mineral sand indicated the observance of the 5 mg/m3 OSHA PEL for respirable dust and/or the PEL for quartz ensures the user is below the exposure limits established for uranium and thorium. No LD50 or LC50 can be found for zircon sand.

Appropriate engineering controls

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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.



General hygiene considerations

Observe any medical surveillance requirements. 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 range Not available.

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.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity The 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 avoid Contact 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.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

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|---------------------|--|
| Inhalation | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Causes severe skin burns. |
| Eye contact | Causes serious eye damage. |
| Ingestion | Causes digestive tract burns. |

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

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|--|--|
| Acute toxicity | Not known. |
| Skin corrosion/irritation | Causes severe skin burns and eye damage. |
| Serious eye damage/eye irritation | Causes serious eye damage. |

Respiratory or skin sensitization

| | |
|----------------------------------|---|
| Respiratory sensitization | Not a respiratory sensitizer. |
| Skin sensitization | This product is not expected to cause skin sensitization. |

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

| | |
|--|-----|
| Germ cell mutagenicity: Ames test | |
| SHAMROCK 30 RAM (WM-7639) | 0 0 |
| Germ cell mutagenicity: Chromosome aberration | |
| SHAMROCK 30 RAM (WM-7639) | 0 0 |
| Germ cell mutagenicity: Micronucleus | |
| SHAMROCK 30 RAM (WM-7639) | 0 0 |

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Chromium (III) oxide (CAS 1308-38-9) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

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

| | |
|--|-----|
| Fertility - EU category | |
| SHAMROCK 30 RAM (WM-7639) | 0 0 |
| Fertility effects - Males | |
| SHAMROCK 30 RAM (WM-7639) | 0 0 |
| Fertility effects - Males and females | |
| SHAMROCK 30 RAM (WM-7639) | 0 0 |

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

Ecotoxicity The 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 any ingredients in the mixture.

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.

13. Disposal considerations

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|--|--|
| 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 | Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority. |
| Waste from residues / unused products | As sold, this product is not RCRA hazardous. Final used condition must be evaluated prior to disposal. Dispose of waste product in accordance with Federal, State and Local regulations. The chrome compounds (Cr III) in this product may be altered to a hexavalent compound (Cr VI) under certain use conditions, such as exposure to alkali salts and/or high temperatures. Proper waste testing (such as TCLP) must be done to determine the waste status of used product. Reuse and recycling of chrome Refractories is recommended whenever possible. |
| 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 Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |

15. Regulatory information

| | | |
|---|--|-----------------|
| US federal regulations | This 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) | Orthophosphoric Acid (CAS 7664-38-2) Listed. | |
| SARA 304 Emergency release notification | Not regulated. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | Not regulated. | |
| Superfund Amendments and Reauthorization Act of 1986 (SARA) | | |
| SARA 302 Extremely hazardous substance | Not listed. | |
| SARA 311/312 Hazardous chemical | Yes | |
| Classified hazard categories | Skin corrosion or irritation Serious eye damage or eye irritation Carcinogenicity | |
| SARA 313 (TRI reporting) | | |
| Chemical name | CAS number | % by wt. |
| Aluminium Oxide (Non-Fibrous) | 1344-28-1 | 60 - 80 |
| Chromium (III) oxide | 1308-38-9 | 20 - 40 |
| Other federal regulations | | |
| Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List | Chromium (III) oxide (CAS 1308-38-9) | |
| Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) | Not regulated. | |
| Safe Drinking Water Act (SDWA) | Not regulated. | |

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Orthophosphoric Acid (CAS 7664-38-2)

High priority

US state regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (SiO₂) (CAS 14808-60-7)

Listed: October 1, 1988

Titanium Dioxide (CAS 13463-67-7)

Listed: September 2, 2011

VANADIUM PENTAOXIDE (CAS 1314-62-1)

Listed: February 11, 2005

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Orthophosphoric Acid (CAS 7664-38-2)

International Inventories

| 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) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | 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 07-23-2015

Revision date 06-30-2021

Version # 03

Disclaimer This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Revision information This document has undergone significant changes and should be reviewed in its entirety.