

## 1. Identification

**Product identifier** JADE SET SUPER; JADE SET SUPER SPECIAL

**Other means of identification**

**Brand Code** 5858, 5859

**Recommended use** For Industrial Use Only

**Recommended restrictions** None known.

**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** CHEMTREC 24 HOUR 1-800-424-9300  
 EMERGENCY #

**Supplier** Not available.

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Skin corrosion/irritation Category 1  
 Serious eye damage/eye irritation Category 1  
 Health hazards not otherwise classified Category 1

**Environmental hazards** Not classified.

**Label elements**



**Signal word** Danger

**Hazard statement** Causes severe skin burns and eye damage. Causes serious eye damage. Presents a health hazard which is not otherwise classified.

**Precautionary statement**

**Prevention** Do not breathe dust. 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. 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.

**Other hazards** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
ALPHA-ALUMINA		1344-28-1	60 - 80
ALUMINUM, WATER SOLUBLE SALTS, N.O.S.		13530-50-2	2.5 - 10
CHROMIUM (III) OXIDE		1308-38-9	2.5 - 10
PHOSPHORIC ACID		7664-38-2	2.5 - 10
Bentonite		1302-78-9	1 - 2.5
Other components below reportable levels			10 - 20

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	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.
<b>Eye contact</b>	Do not rub eyes. 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.
<b>Ingestion</b>	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.
<b>Most important symptoms/effects, acute and delayed</b>	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.
<b>Indication of immediate medical attention and special treatment needed</b>	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.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

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

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Material can be slippery when wet. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.  Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. 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).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
CHROMIUM (III) OXIDE (CAS 1308-38-9)	TWA	0.5 mg/m <sup>3</sup>	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	2 mg/m <sup>3</sup>
CHROMIUM (III) OXIDE (CAS 1308-38-9)	TWA	0.5 mg/m <sup>3</sup>
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m <sup>3</sup>	Respirable.
CHROMIUM (III) OXIDE (CAS 1308-38-9)	TWA	0.5 mg/m <sup>3</sup>	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
CHROMIUM (III) OXIDE (CAS 1308-38-9)	TWA	0.5 mg/m <sup>3</sup>	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
CHROMIUM (III) OXIDE (CAS 1308-38-9)	TWA	0.5 mg/m <sup>3</sup>	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

Components	Type	Value	Form
ALPHA-ALUMINA (CAS 1344-28-1)	TWA	10 mg/m <sup>3</sup>	Total dust.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	TWA	2 mg/m <sup>3</sup>	
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	

**Biological limit values**

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

**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. 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. 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.

**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**

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**

Powder.

**Color**

Not available.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

Not available.

<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Bulk density</b>	2850 kg/m <sup>3</sup>
<b>Chemical family</b>	Refractory Mortar
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Chlorine. Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	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. Dusts may irritate the respiratory tract, skin and eyes.

### Information on toxicological effects

<b>Acute toxicity</b>	Not known.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.

## Respiratory or skin sensitization

### Canada - Alberta OELs: Irritant

ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	Irritant
CHROMIUM (III) OXIDE (CAS 1308-38-9)	Irritant
PHOSPHORIC ACID (CAS 7664-38-2)	Irritant

**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.

**Carcinogenicity** 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. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

### ACGIH Carcinogens

ALPHA-ALUMINA (CAS 1344-28-1)	A4 Not classifiable as a human carcinogen.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	A4 Not classifiable as a human carcinogen.
CHROMIUM (III) OXIDE (CAS 1308-38-9)	A4 Not classifiable as a human carcinogen.

### Canada - Manitoba OELs: carcinogenicity

ALPHA-ALUMINA (CAS 1344-28-1)	Not classifiable as a human carcinogen.
ALUMINUM, WATER SOLUBLE SALTS, N.O.S. (CAS 13530-50-2)	Not classifiable as a human carcinogen.
CHROMIUM (III) OXIDE (CAS 1308-38-9)	Not classifiable as a human carcinogen.

### IARC Monographs. Overall Evaluation of Carcinogenicity

CHROMIUM (III) OXIDE (CAS 1308-38-9)	3 Not classifiable as to carcinogenicity to humans.
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**Reproductive toxicity** This 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.

## 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 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.

## 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** 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**

**TDG**

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**

**Canadian regulations**

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)**

CHROMIUM (III) OXIDE (CAS 1308-38-9)

**Precursor Control Regulations**

Not regulated.

**International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**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)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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

**Issue date** 11-08-2017

**Version #** 01

**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** Product and Company Identification: Product Codes  
Hazards Identification: EU Hazard Classifications  
Composition / Information on Ingredients: Ingredients  
Physical & Chemical Properties: Multiple Properties  
Toxicological Information: Toxicological Data  
Ecological Information: Ecotoxicity  
Transport Information: Hazreg Values Transportation  
Material Attributes & Uses; Experimental Data: Physical States  
GHS: Classification