

## 1. Identification

**Product identifier** NAREZ AM5; NAREZ AM5 CASED; NAREZ AM5 CO-MOLDED

**Other means of identification**

**Brand Code** 8738, 7990, 9208

**Recommended use** For Industrial Use Only

**Recommended restrictions** None known.

**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

**Classified hazards**

This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection. Dust may cause cancer.

**Label elements**

This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection. Dust may cause cancer.

**Hazard(s) not otherwise classified (HNOC)**

This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection. Dust may cause cancer.

## 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Magnesium Oxide		1309-48-4	80 - 90
Aluminium		7429-90-5	1 - 2.5
Carbon Black		1333-86-4	1 - 2.5
Aluminium Oxide (Non-Fibrous)		1344-28-1	0.1 - 1
Phenol		108-95-2	0.1 - 1
Ethane-1,2-diol		107-21-1	0 - 0.1

Chemical name	Common name and synonyms	CAS number	%
Formaldehyde		50-00-0	0 - 0.1
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

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	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

<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. 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. 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>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.  Small Spills: 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 release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

#### 7. Handling and storage

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

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	PEL	5 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>	Respirable dust. Total dust.
Carbon Black (CAS 1333-86-4)	PEL	3.5 mg/m <sup>3</sup>	
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m <sup>3</sup>	Total particulate.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Carbon Black (CAS 1333-86-4)	TWA	3 mg/m <sup>3</sup>	Inhalable fraction.
Magnesium Oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Respirable. Welding fume or pyrophoric powder. Total
Carbon Black (CAS 1333-86-4)	TWA	0.1 mg/m <sup>3</sup>	

### Biological limit values

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

### Exposure guidelines

The resin binder in this product was specifically engineered to have low toxicity, with minimal free-phenol (less than 100ppm in this refractory product) and no free-formaldehyde. Under certain conditions, thermal decomposition products may still include carbon monoxide, carbon dioxide, formaldehyde, phenol and aromatic and/or aliphatic compounds.

### 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).

#### 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

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.

<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	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.

## 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. Refractories containing crystalline silica may, after service, contain more or less crystalline silica. Care must be taken to avoid and/or control dust from demolition. If in doubt of the proper protection, seek advice from a safety professional. The organic binder in this product falls into a class known as phenolic resin. Refractory products using this type of binder are supplied in two forms, (1) shaped products such as brick and (2) monolithics such as refractory plastics and rams. The hazards associated with phenolic resin are different in the two forms. For pre-cured shapes (brick), the binder has been reacted or polymerized by heat to its solid form prior to shipment. On decomposition by heating, where there is sufficient air and heating rate, the gaseous products are mostly carbon dioxide and water. Under low or limited oxygen supply, decomposition products during heat-up and early service may include phenol, as well as aromatic and/or aliphatic derivatives. After a campaign in service, this refractory product should be completely coked and in that condition the material for disposal would be carbon and an inorganic oxide. During field installation of non-cured unshaped products (monolithics), there is a possibility of exposure to trace amounts of phenol by skin contact and inhalation. After the product has been heated to high temperatures in service, it will have similar decomposition characteristics to pre-cured shapes.
<b>Incompatible materials</b>	Phosphorus. 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.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
-------------------	--------------------------------------



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)**

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

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Aluminium	7429-90-5	1 - 2.5

**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 (SDWA)** Not regulated.

**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 (CAS 7429-90-5)  
Carbon Black (CAS 1333-86-4)  
Magnesium Oxide (CAS 1309-48-4)

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

Aluminium (CAS 7429-90-5)  
Carbon Black (CAS 1333-86-4)  
Magnesium Oxide (CAS 1309-48-4)

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

Aluminium (CAS 7429-90-5)  
Carbon Black (CAS 1333-86-4)  
Magnesium Oxide (CAS 1309-48-4)

**US. Rhode Island RTK**

Aluminium (CAS 7429-90-5)

**US. California Proposition 65**

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

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**Carbon Black (CAS 1333-86-4)  
Formaldehyde (CAS 50-00-0)Listed: February 21, 2003  
Listed: January 1, 1988**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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
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** 07-09-2015**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  
Toxicological Information: Toxicological Data