

# SAFETY DATA SHEET

321

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

### 1.1 Product identifier

Product name : 321  
ADG : -  
Product code : 321  
Product description : Not available.  
Product type : Solid.  
Other means of identification : Not available.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Refractory Ceramic Shape.

### 1.3 Details of the supplier of the safety data sheet

Supplier : EMHART Glass Manufacturing Inc.  
405 East Peach Street  
PO Box 580  
Owensville MO 65066 USA  
Tel: +1 573 437 2132  
Fax: +1 573 437 3146  
e-mail address of person responsible for this SDS : webmaster@emhartglass.com

### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

Telephone number : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887  
Hours of operation : 24/7

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Product definition : Mixture

#### GHS Classification

Aquatic Chronic 3, H412

#### Classification

Not regulated.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.



## SECTION 2: Hazards identification

### 2.2 Label elements

- Signal word** : No signal word.
- Hazard statements** : Harmful to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : P273 - Avoid release to the environment.
- Response** : Not applicable.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Risk phrases** : Not classified.
- Statement of hazardous/dangerous nature** : NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

## SECTION 3: Composition/information on ingredients

**Substance/mixture** : Mixture

Product/ingredient name	Identifiers	%	Classification	
			AU Classification	GHS Classification
Aluminium oxide	EC: 215-691-6 CAS: 1344-28-1	>=75 - <90	Not classified.	Not classified.
Zirconium dioxide	EC: 215-227-2 CAS: 1314-23-4	>=10 - <20	Xi; R36/38	Not classified.

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

See Section 16 for the full text of the R-phrases declared above.

See Section 16 for the full text of the H statements declared above.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- Protection of first-aiders** : No special protection is required.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.



## SECTION 4: First aid measures

- Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.  
**Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : No specific fire or explosion hazard.  
**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
metal oxide/oxides

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : No special precaution is required.  
**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Put on appropriate personal protective equipment.  
**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also Section 8 for additional information on hygiene measures.

### 6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).



## SECTION 6: Accidental release measures

### 6.3 Methods and materials for containment and cleaning up

**Spill** : Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).  
**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

**Recommendations** : Not available.  
**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Aluminium oxide	<b>Safe Work Australia (Australia, 7/2012).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
Zirconium dioxide	<b>Safe Work Australia (Australia, 7/2012).</b> STEL: 10 mg/m <sup>3</sup> , (as Zr) 15 minutes. TWA: 5 mg/m <sup>3</sup> , (as Zr) 8 hours.

## SECTION 8: Exposure controls/personal protection

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, drinking, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

#### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Skin** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Solid. [Stone.]

**Colour** : Off-white.

**Odour** : Odourless.

**Odour threshold** : Not available.

**pH** : Not available.

**Melting point/freezing point** : Not available.

**Initial boiling point and boiling range** : >2000°C

**Flash point** : Not available.

**Evaporation rate** : Not available.



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321

## SECTION 9: Physical and chemical properties

<b>Flammability (solid, gas)</b>	: Not available.
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not available.
<b>Upper/lower flammability or explosive limits</b>	: Not applicable.
<b>Vapour pressure</b>	: Not available.
<b>Vapour density</b>	: Not available.
<b>Relative density</b>	: 3.4
<b>Solubility(ies)</b>	: Not soluble in water.
<b>Solubility in 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>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: Inert material.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

There is no data available.

#### Irritation/Corrosion

There is no data available.

#### Sensitisation

There is no data available.



## SECTION 11: Toxicological information

### Specific target organ toxicity (single exposure)

There is no data available.

### Specific target organ toxicity (repeated exposure)

There is no data available.

### Aspiration hazard

There is no data available.

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

#### Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

#### Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

There is no data available.

### 12.2 Persistence and degradability

There is no data available.

### 12.3 Bioaccumulative potential

There is no data available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## 14. Transport information

### International transport regulations

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADG</b>	Not regulated.	-	-	-		-
<b>IMDG</b>	Not regulated.	-	-	-		-
<b>IATA</b>	Not regulated.	-	-	-		-

PG\* : Packing group

Exemption to the above classification may apply.



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321

## 15. Regulatory information

### 15.1 Regulatory information

#### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

#### Control of Scheduled Carcinogenic Substances

No listed substance

**Australia inventory (AICS)** : All components are listed or exempted.

## SECTION 16: Other information

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aquatic Chronic 3, H412

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aquatic Chronic 3, H412	Calculation method

**Full text of abbreviated H statements** : H412 Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]** : Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3

**Full text of abbreviated R phrases** : R36/38- Irritating to eyes and skin.

**Full text of classifications [DSD/DPD]** : Xi - Irritant

**Person who prepared the MSDS** : KMK Regulatory Services Inc.

### History

**Date of issue** : 15/10/2013

**Version** : 1

**Revised Section(s)** : Not applicable.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

