



# DURO BRICK

Health Hazard	1
Flammability	0
Physical hazards	0

## Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) Freeport Brick Division - Kittanning Brick Division

Original Issue: 2008

Revised: 07/13/12

### Section 1 – Chemical Product and Company Identification

**GHS Product Identifier:** Duro Brick  
**Other means of identification:** Duro Type II, Duro Type III, Duro Dot  
**CAS Number:** Mixture  
**Supplier's Details:** Fuzion Technologies, Inc. 500 Mill Street Freeport, PA 16229  
**Phone Number (s):** 1-724-295-2800; FAX: 724-295-2815  
**Off-Hour Emergency Phone Number:** 1-724-295-2800

### Section 2 - Hazards Identification

**Duro Brick** is hazardous according to the criteria specified in European Directives 67/548/EEC and 1999/45/EC and OSHA 29 CFR 1910.1200 Hazard Communication Standard. The categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3" United Nations, New York and Geneva, 2009 have been evaluated and are listed below. Refer to Section 3, 8 and 11 for additional information.

Hazard Classification	Hazard Category	Hazard Symbols	Signal Word	Hazard Statement
<b>Skin Irritation</b> (covers Categories 1-3)	1A		<b>Danger</b>	Causes severe skin burns <b>R35</b> -Causes severe burns
<b>Eye Damage/ Irritation</b> (covers Categories 1, 2A and 2B)	1		<b>Danger</b>	Causes serious eye damage <b>R41</b> -Risk of serious damage to eyes
<b>Carcinogenicity</b> (covers Categories 1A, 1B and 2)	1A		<b>Danger</b>	<b>R45</b> -May Cause Cancer
<b>Specific Target Organ Systemic Toxicity (STOST) following Single Exposure</b> (covers Categories 1-3)	1		<b>Danger</b>	Causes damage to lung
<b>STOST following Repeated Exposure</b> (covers Categories 1 and 2)	1		<b>Danger</b>	Causes damage to lung, kidney and immune system

**Precautionary Statement/Emergency Overview:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash thoroughly after handling. Wash contaminated clothing before reuse.

**S53** – Avoid exposure, obtain special instructions before use. **S36/37/39** – Wear suitable protective clothing, gloves and eye/face protection. **S24/25** - Avoid contact with skin and eyes. **S23**- Do not breathe dusts/fume/gas/mist/vapor/spray. **S27/28** – After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of water.

### Section 3 – Composition/Information on Ingredients

**Chemical identity of the substance:**

Ingredient Name	EC Number	CAS Number	% weight
Crystalline Silica	238-878-4	14808-60-7	64
Aluminum Oxide	215-691-6	1344-28-1	28
Iron Oxides	215-168-2	1309-37-1	1
Potassium Oxide	235-227-6	12136-45-7	2
Magnesium Oxide	215-171-9	1309-48-4	1
Titanium Dioxide	236-675-5	13463-67-7	2

EC- European Community

CAS- Chemical Abstract Service

**Duro Brick** contains small amounts of various constituents in addition to those listed. These small quantities are frequently referred to as "trace" or "residual" constituents that generally originate in the raw materials used **Duro Brick** may contain the following trace or residual constituents: Calcium oxide and sodium oxide.

## Section 4 - First Aid Measures

**Description of necessary first aid measures: IF Exposed:** Immediately call a POISON CENTER or doctor/physician

- **Inhalation: IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- **Eye Contact: IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **Skin Contact: IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
- **Ingestion: IF SWALLOWED:** Rinse mouth. Do not induce vomiting.

**Most important acute and chronic symptoms/effects:**

**Primary Entry Routes:** Excessive total particulate exposure may cause irritation to the eyes, skin and respiratory tract. Operations which generate high dust concentrations may result in the following effects if exposures exceed recommended limits as listed in Section 8. Possible Cancer Hazard.

**Target Organs:** Respiratory system, eyes, skin

**Acute Effects:**

- **Inhalation:** Excessive exposure to high concentrations of dust may cause irritation to the eyes, skin and mucous membranes of the upper respiratory tract.
- **Eye:** Particles of iron or iron compounds may become imbedded in the eye. Excessive exposure to high concentrations of dust may cause irritation to the eyes.
- **Skin:** Skin contact with dusts may cause irritation or sensitization, possibly leading to dermatitis. Skin contact with metallic fumes and dusts may cause physical abrasion.
- **Ingestion:** Ingestion of dust may cause nausea and/or vomiting.

**Acute Effects by component:**

- **CRYSTALLINE SILICA (Silicon Dioxide):** Causes irritation and inflammation of the respiratory tract. May cause abrasion of the cornea. Inhalation may cause cough. A single exposure to very high airborne levels may cause lung irritation in exposed humans.
- **ALUMINUM OXIDE:** Inhalation may cause cough.
- **IRON OXIDE:** Iron is harmful if swallowed, causes skin irritation, and causes eye irritation. Contact with iron oxide has been reported to cause skin irritation and serious eye damage.
- **POTASSIUM OXIDE:** Reacts with water to generate heat. Damaging to mucosal membranes of the respiratory tract; May cause irritation and potentially pulmonary edema.
- **MAGNESIUM OXIDE:** Headache, cough, sweating, nausea and fever may be caused by exposure to freshly formed fumes. The symptoms of metal fume fever do not become manifest until 4-12 hours after exposure.
- **TITANIUM DIOXIDE:** Not Reported/ Not Classified.

### *Chronic Effects:*

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure. Persons with pre-existing skin disorders may be more susceptible to dermatitis. Chronic inhalation of dusts are associated with the following conditions:

- **SILICA (Crystalline quartz):** Inhalation of quartz is classified by IARC as a probable human carcinogen. Chronic exposure can cause silicosis, a form of lung scarring that can cause shortness of breath, reduced lung function, and in severe cases, death. Repeated exposure may cause kidney damage as well as increased incidence of autoimmune disorder.
- **ALUMINUM OXIDE (Al<sub>2</sub>O<sub>3</sub>):** Considered to be an inert or nuisance dust. Aluminum dusts/fines are a low health risk by inhalation and should be treated as a nuisance dust.
- **IRON OXIDE:** Chronic inhalation of excessive concentrations of iron oxide fumes or dusts may result in the development of a benign lung disease, called siderosis, which is observable as an X-ray change. No physical impairment of lung function has been associated with siderosis. Inhalation of excessive concentrations of ferric oxide may enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Iron oxide is listed as a Group 3 (not classifiable) carcinogen by the International Agency for Research on Cancer (IARC).
- **POTASSIUM OXIDE:** Inhalation can irritate the lungs. Repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath.
- **MAGNESIUM OXIDE:** Irritation of eyes, nose, and throat. Symptoms may include dryness of nose and mouth, cough, feeling of weakness, tightness of chest, muscular pain, chills, fever, headache, nausea, and vomiting.
- **TITANIUM DIOXIDE:** There is no evidence of a health hazard from inhalation of titanium dioxide at airborne concentrations below 10 mg/m<sup>3</sup>. The toxicity of titanium dioxide has been found to be relatively inert. Eye contact with pure material can cause particulate irritation. Skin contact with titanium dusts may cause physical abrasion.

Long-term inhalation exposure to high concentrations (over-exposure) to agents that produce lung disorders may act synergistically with inhalation of oxides, vapors or dusts of this product to cause toxic effects.

**Carcinogenicity:** This product, **Duro Brick** is not listed by IARC, NTP or OSHA as a carcinogen. However, IARC identifies welding fumes as a Group 2B carcinogen, a mixture that is possibly carcinogenic to humans. IARC identifies Silica dust, crystalline, in the form of quartz or cristobalite as Group 1 - carcinogens that are carcinogenic to humans. ACGIH lists silica, crystalline, quartz or cristobalite as an A2 - suspected human carcinogen. NTP identifies Silica, Crystalline (Respirable Size), as known to be carcinogenic to humans, and OSHA identifies crystalline silica as a Group S carcinogen.

**Medical Conditions Aggravated by Long-Term Exposure:** Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any airborne particulate matter exposure.

**SARA Potential Hazard Categories:** Immediate Acute Health Hazard; Delayed Chronic Health Hazard

## Section 5 – Fire and Explosion Hazard Information

**Suitable Extinguishing Media:** Use extinguishers appropriate for surrounding materials.

**Specific Hazards arising from the chemical:** Not applicable for solid product.

**Explosion hazard:** Not applicable for solid product.

## Section 5 – Fire and Explosion Hazard Information (continued)

**Special protective equipment and precautions for fire fighters:** Self-contained MSHA/NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used.

## Section 6 - Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Not applicable to **Duro Brick** in solid state. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust. Personnel should be protected against contact with eyes and skin. Fine, dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid using compressed air. Do not release into sewers or waterways. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations.

**Environmental precautions:** Follow applicable federal, state, and local regulations.

**Methods and materials for containment and clean up:** Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.

## Section 7 - Handling and Storage

**Precautions for safe handling:** Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well ventilated area. Local exhaust ventilation should be used to control the emission of air contaminants. General dilution ventilation may assist with the reduction of air contaminant concentrations.

**Conditions for safe storage, including any incompatibilities:** Whenever feasible, store locked up. Store away from acids and incompatible materials.

## Section 8 - Exposure Controls / Personal Protection

### Occupational Exposure Limits (OELs):

Ingredients	OSHA PEL <sup>1</sup>	ACGIH TLV <sup>2</sup>	NIOSH REL <sup>3</sup>	IDLH <sup>4</sup>
Crystalline Silica (as Quartz)	(30 mg/m <sup>3</sup> )/(%SiO <sub>2</sub> + 2) (as total dust) (10mg/m <sup>3</sup> )/(%SiO <sub>2</sub> + 2) (as respirable fraction)	0.025 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>
Aluminum Oxide	15 mg/m <sup>3</sup> (as total dust, PNOR <sup>5</sup> ) 5.0 mg/m <sup>3</sup> (as respirable fraction, PNOR)	10 mg/m <sup>3</sup>	NE	NE
Iron Oxides	10 mg/m <sup>3</sup> (as iron oxide fume)	5.0 mg/m <sup>3</sup>	5.0 mg/m <sup>3</sup> (as iron oxide dust and fume)	2,500 mg/m <sup>3</sup>
Magnesium Oxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	NE	750 mg/m <sup>3</sup>
Potassium Oxide	NE	NE	NE	NE
Titanium Dioxide	15 mg/m <sup>3</sup> (as TiO <sub>2</sub> , total dust)	10 mg/m <sup>3</sup> (as TiO <sub>2</sub> )	LFC (as TiO <sub>2</sub> ) <sup>6</sup>	5,000 mg/m <sup>3</sup> (as TiO <sub>2</sub> )

NE - None Established

### Notes:

- OSHA PELs (Permissible Exposure Limits) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A ("C") designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during a workday.
- Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted. ACGIH TLVs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
- The National Institute for Occupational Safety and Health Recommended Exposure Limits (NIOSH-REL), Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
- The "immediately dangerous to life or health air concentration values (IDLHs)" are used by NIOSH as part of the respirator selection criteria and were first developed in the mid-1970's by NIOSH. The Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994.
- PNOR (Particulates Not Otherwise Regulated). All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by a limit which is the same as the inert or nuisance dust limit of 15 mg/m<sup>3</sup> for total dust and 5 mg/m<sup>3</sup> for the respirable fraction.
- LFC – Lowest Feasible Concentration, Refer to Section 11, Toxicological Information (e)

**Appropriate Engineering Controls:** Local exhaust ventilation should be used to control the emission of air contaminants. General dilution ventilation may assist with the reduction of air contaminant concentrations. Emergency eye wash stations and deluge safety showers should be available in the work area.

### Personal Protective Equipment (PPE):

- Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Concentration in air of the various contaminants determines the extent of respiratory protection needed. Half-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 10 times the exposure limit. Full-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 50 times the exposure limit. Protection by air-purifying negative-pressure and powered air respirators is limited. Use a positive-pressure-demand, full-face, supplied air respirator or self contained breathing apparatus (SCBA) for concentrations above 50 times the exposure limit. If exposure is above the IDLH (Immediately dangerous to life or health) for any of the constituents, or there is a possibility of an uncontrolled release or exposure

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### Section 8 - Exposure Controls / Personal Protection (continued)

**Protective Clothing/Equipment:**

- **Eyes:** Wear eye protection/face protection. For the generation of airborne particulates, use safety glasses to prevent eye contact as required.
- **Skin:** Persons handling this product should wear appropriate clothing to prevent skin contact. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.
- **Other protective equipment:** An eyewash fountain and deluge shower should be readily available in the work area.

### Section 9 - Physical and Chemical Properties

**Appearance and Odor:** Solid, Red, Odorless

**Odor Threshold:** ND

**Vapor Pressure at 20°C (68°F):** NA

**Vapor Density (Air = 1):** NA

**Formula Weight:** ND

**Density:** 2.35 g/cc

**Specific Gravity (H<sub>2</sub>O = 1, at 4°C):** 2.55

**pH:** NA

**Flash Point:** NA

**Auto-ignition Temperature:** ND

**Decomposition Temperature:** ND

**Partition Coefficient Oil/water:** NA

**Flammability (solid, gas):** Not flammable

**Explosive Properties:** ND

**Water Solubility:** ND

**Fat Solubility:** ND

**Other Solubilities:** ND

**Boiling Point:** ND

**Viscosity:** NA

**Refractive Index:** NA

**Surface Tension:** NA

**% Volatile by volume:** NA

**Evaporation Rate:** NA

**Freezing Point:** NA

**Melting/Boiling Point:** ND

**UEL:** ND

**LEL:** ND

**Oxidizing Properties:** ND

ND - Not Determined for product as a whole

NA - Not Applicable

### Section 10 - Stability and Reactivity

**Reactivity:** Not Determined (ND) for product as a whole.

**Stability:** Duro Brick is stable under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization will not occur.

**Chemical Incompatibilities:** Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.

**Conditions to Avoid:** ND

**Hazardous Decomposition/Combustion Products:** Metal oxides and toxic vapors may be released at elevated temperatures.

**Sensitivity to Mechanical Impact:** ND

**Sensitivity to Static Discharge:** ND

### Section 11 - Toxicological Information

The following toxicity data have been determined for **Duro Brick** using the information available for its components applied to the guidance on the preparation of an SDS under the requirements of the GHS:

- a. No **LC<sub>50</sub>** or **LD<sub>50</sub>** has been established for **Duro Brick** as a mixture. The following data has been determined for the components:
  - **Silicon Dioxide:** LD<sub>50</sub> > 15,000 mg/kg (Oral/Rat)
  - **Aluminum Oxide:** LD<sub>50</sub> > 5,000 mg/kg (Oral/ Rat)
  - **Iron Oxide:** LD<sub>50</sub> > 10,000 mg/kg (Oral/ Rat)
  - **Titanium Dioxide:** LD<sub>50</sub> > 10,000 mg/kg (Oral/Rat); LC<sub>50</sub> > 6.82 mg/l (Inhalation/Rat)
- b. No **Skin Irritation** data available for **Duro Brick** as a mixture. The following Skin Irritation information was found for the components:
  - **Iron Oxide:** Moderately irritating
  - **Magnesium Oxide:** Slight skin irritation noted in worker survey.
  - **Potassium Oxide:** Causes skin burn. Reacts with water to generate heat
- c. No **Eye Irritation** data available for **Duro Brick** as a mixture. The following Eye Irritation information was found for the components:
  - **Silicon Dioxide:** Crystalline silica may cause abrasion of the cornea.
  - **Iron Oxide:** Severely irritating; may cause burns.
  - **Magnesium Oxide:** Slight eye irritation noted in worker survey.
  - **Potassium Oxide:** Causes eye burns
- d. No **Germ Cell Mutagenicity** data available for **Duro Brick** as a mixture. The following Germ Cell Mutagenicity information was found for the components:
  - **Iron Oxide:** Both positive and negative data.
  - **Manganese:** Inconsistent results in genotoxicity tests.
- e. No **Carcinogenicity** data available for **Duro Brick** as a mixture. The following Carcinogenicity information was found for the components:
  - **Silicon Dioxide:** Repeated exposure to crystalline silica causes lung cancer in exposed humans. IARC-1, NTP-1, TLV-A2, and OSHA.
  - **Iron Oxide:** IARC-3, TLV-A4
  - **Titanium Dioxide** - According to the experimental studies and reviewed IUCLID toxicological data, Rats (but not mice) exposed to ultrafine TiO<sub>2</sub> particles at 10 mg/m<sup>3</sup> developed lung tumors; probably results from inhibited particle clearance from lung. Titanium and titanium compounds, for the most part, have

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### Section 11 - Toxicological Information (continued)

- f. No **Toxic Reproduction** data available for **Duro Brick** as a mixture. The following Toxic Reproductive information was found for the components
- **Aluminum Oxide:** ATSDR has found these ingredients may cause delay in development of neurobehavioral indices
- g. No **Specific Target Organ Systemic Toxicity (STOST) Following Single Exposure** data available **Duro Brick** as a mixture. The following STOST Following Single Exposure information was found for the components:
- **Silicon Dioxide:** Single exposure to very high airborne levels may cause lung irritation in exposed humans.
  - **Magnesium Oxide:** Slight respiratory tract irritation is expected with inhalation of powder.
  - **Potassium Oxide:** Damaging to mucosal membranes of the respiratory tract; May cause irritation and potentially pulmonary edema. Reacts with water to generate heat.
- h. No **Specific Target Organ Systemic Toxicity (STOST) Following Repeated Exposure** data available **Duro Brick** as a mixture. The following STOST Following Repeated Exposure information was found for the components:
- **Silicon Dioxide:** Repeated exposure to crystalline silica causes silicosis and kidney damage as well as increased incidence of autoimmune disorders in humans.
  - **Titanium Dioxide:** Inflammatory lesions in rat lungs produced by 3-month exposures to either 22.3 mg/m<sup>3</sup> of ultrafine TiO<sub>2</sub>; lesions “regressed” during a 1-year period following cessation of exposure.
  - **Aluminum Oxide:** Chronic exposure to aluminum flake has been reported to cause pneumoconiosis in workers. Repeat oral exposure to aluminum results in decrements in neurobehavioral function and development.

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

### Section 12 - Ecological Information

**Hazard Category:** Not Reported

**Hazard Symbol:** No Symbol

**Signal Word:** No Signal Word

**Hazard Statement:** No Statement

**Ecotoxicity:** No data available for the product, **Duro Brick** as a whole. However, individual components of the product have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife as follows:

- **Aluminum Oxide:** LC<sub>50</sub>: >100 mg/L; Fish and algae
- **Iron Oxide:** LC<sub>50</sub>: >1000 mg/L; Fish

**Mobility:** No Data Available

**Persistence & Degradability:** No Data Available

**Bioaccumulative Potential:** No Data Available

**Note:** The listing of regulations relating to a Fuzion product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

### Section 13 - Disposal Considerations

**Disposal:** Dispose of contents/containers in accordance with federal, state and local regulations.

**Container Cleaning and Disposal:** Follow applicable federal, state and local regulations. Observe safe handling precautions. European Waste Catalogue 10-12-99 (wastes not otherwise specified).

**Please note this information is for Duro Brick in its original form. Any alterations can void this information.**

### Section 14 - Transport Information

#### DOT Transportation Data (49 CFR 172.101):

US Department of Transportation (DOT) under 49 CFR 172 does not regulate **Duro Brick** as a hazardous material under 49 CFR 172.101. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

<b>Shipping Name:</b> NA <b>Shipping Symbols:</b> NA <b>Hazard Class:</b> NA <b>UN No:</b> NA <b>Packing Group:</b> NA <b>DOT/IMO Label:</b> NA <b>Special Provisions (172.102):</b> NA	<b>Packaging Authorizations</b> <b>a) Exceptions:</b> NA <b>b) Group:</b> NA <b>c) Authorization:</b> NA	<b>Quantity Limitations</b> <b>a) Passenger, Aircraft, or Railcar:</b> No Limit <b>b) Cargo Aircraft Only:</b> No Limit <b>Vessel Stowage Requirements</b> <b>a) Vessel Stowage:</b> NA <b>b) Other:</b> NA <b>DOT Reportable Quantities:</b> NA
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The International Maritime Dangerous Goods (IMDG) and the Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID) classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

**DURO BRICK****Section 14 - Transport Information (continued)**

**ADR** – Regulations Concerning the International Carriage of Dangerous Goods by Road does not regulate **Duro Brick** as hazardous substances.

**Shipping Name:** Not Applicable (NA)

**Packaging**

**Portable Tanks & Bulk Containers**

**Classification Code:** NA

a) **Packing Instructions:** NA

a) **Instructions:** NA

**UN No.:** NA

b) **Special Packing Provisions:** NA

b) **Special Provisions:** NA

**Packing Group:** NA

c) **Mixed Packing Provisions:** NA

**ADR Label:** NA

**Special Provisions:** NA

**Limited Quantities:** NA

**IATA** – International Air Transport Association (IATA) considers does not regulate **Duro Brick** as hazardous substances.

**Shipping Name:** Not Applicable (NA)

**Passenger & Cargo Aircraft  
Limited Quantity (EQ)**

**Cargo Aircraft Only**

**Special Provisions:** NA

**Class/Division:** NA

**Pkg Inst:** NA

**Pkg Inst:** NA

**Pkg Inst:** NA

**ERG Code:** NA

**Hazard Label (s):** NA

**Max Net  
Qty/Pkg:** NA

**Max Net  
Qty/Pkg:** NA

**Max Net Qty/Pkg:** NA

**UN No.:** NA

**Packing Group:** NA

**Excepted Quantities (EQ):** NA

Pkg Inst – Packing Instructions

Max Net Qty/Pkg – Maximum Net Quantity per Package

ERG – Emergency Response Drill Code

**Transport Dangerous Goods (TDG) Classification:** **Duro Brick** does not have a TDG classification.

**Section 15 - Regulatory Information**

**Regulatory Information:** *The following listing of regulations relating to a Fuzion Technologies Inc. product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

This product and/or its constituents are subject to the following regulations:

**OSHA Regulations:** OSHA has not established a substance-specific standard for occupational exposure to **Duro Brick**. However, exposures are regulated under OSHA Air Contaminants Standard (29 CFR1910.1000 Table Z-1, Z-2, Z-3) for individual components. Refer to Section 8, Exposure Controls and Personal Protection

**EPA Regulations:** **Duro Brick** is not listed as a whole on the TSCA Inventory. In addition, individual components of the product are listed:

Components	Regulations
Crystalline Silica (as Quartz)	SDWA

**SARA Potential Hazard Categories:** Immediate Acute Health Hazard; Delayed Chronic Health Hazard

**Regulations Key:**

CAA	Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 [As of: 8/18/06]), No ingredients are listed.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (42 USC secs. 9601(14), 9603(a); 40 CFR Sec. 302.4, Table 302.4, Table 302.4 and App. A)
CWA	Clean Water Act (33 USC secs. 1311; 1314(b), (c), (e), (g); 136(b), (c); 137(b), (c) [as of 8/2/06])
RCRA	Resource Conservation Recovery Act (42 USC Sec. 6921; 40 CFR Part 261 App VIII)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III Section 302 Extremely Hazardous Substances (42 USC secs. 11023, 13106; 40 CFR Sec. 372.65) and Section 313 Toxic Chemicals (42 USC secs. 11023, 13106; 40 CFR sec. 372.65 [as of 6/30/05])
TSCA	Toxic Substance Control Act (15 U.S.C. s/s 2601 et seq. [1976])
SDWA	Safe Drinking Water Act (42 U.S.C. s/s 300f et seq. [1974])

**This information should be included in all MSDSs that are copied and distributed for this material.**

**State Regulations:** The product, **Duro Brick** as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

**Pennsylvania Right to Know:** Contains regulated material in the following categories:

- Hazardous Substances: Crystalline Silica (Quartz), Iron Oxide and Magnesium Oxide
- Environmental Hazards: Aluminum Oxide

**California Prop. 65:** Contains elements known to the State of California to cause cancer or reproductive toxicity (Silica, crystalline (airborne particles of respirable size)).

**New Jersey:** Contains regulated material in the following categories:

- Hazard Substances: Crystalline Silica (Quartz), Aluminum Oxide and Magnesium Oxide

**Minnesota:** Silica, Magnesium Oxide and Titanium Dioxide

**Massachusetts:** Aluminum Oxide, Iron Oxide, Crystalline Silica (Quartz), and Titanium Dioxide

**Other Regulations:** The product, **Duro Brick** as a whole may not be listed in other regulations. However, individual components of the product may be listed, check appropriate regulations for further regulatory compliance.



## DURO BRICK

### Section 16 - Other Information

Prepared By: Fuzion Technologies, Inc.

#### Hazardous Material Identification System (HMIS) Classification

Health Hazard	1
Fire Hazard	0
Physical hazards	0

HEALTH= 1, \* Denotes possible chronic hazard if airborne dusts or fumes are generated  
Irritation or minor reversible injury possible.

FIRE= 0, Materials that will not burn

PHYSICAL HAZARDS = 0, Materials that are normally stable, even under fire conditions, and will not react with water, [polymerize](#), decompose, condense, or self-react. Non-[explosives](#).

**Disclaimer:** This information is taken from sources or based upon data believed to be reliable. However, Fuzion Technologies, Inc. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

#### National Fire Protection Association (NFPA)



HEALTH = 1, Exposure could cause [irritation](#) but only minor residual injury even if no treatment is given.

FIRE = 0, Materials that will not burn

INSTABILITY = 0, Normally stable, even under fire exposure conditions, and are not reactive with water.

