SAFETY DATA SHEET

1. Chemical product and company identification

Product name: INSBOARD 2300 SERIES

Other identification
- Synonyms: INSBOARD 2300 LD; INSBOARD 2300 HD; INSBOARD 2300-45; INSBOARD 2300 HD H
- Brand Code: 0579, 0580, 012B, 723C

Recommended use and Limitations on use
- Recommended use: For Industrial Use Only

Manufacturer/Supplier
- Harbison Walker International
- Address: 1305 Cherrington Parkway, Suite 100, Moon Township, PA 15108, USA
- Telephone: General Phone: 412-375-6600
- CHEMTREC EMERGENCY US/CAN ONLY: 1-800-424-9300
- E-mail: sds@thinkHWI.com
- Contact person: Product Safety Specialist
- Emergency telephone number: PT Harbison Walker International 62.254.398750-1

2. Hazards identification

GHS classification
- Physical hazards: Not classified.
- Health hazards: Carcinogenicity Category 2
- Environmental hazards: Not classified.

Label elements
- Pictogram

Signal word: Warning
Hazard statement: Suspected of causing cancer.

Precautionary statement
- Prevention: 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.
- Response: IF exposed or concerned: Get medical advice/attention.
- 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

Substance or mixture: Mixture

Chemical property

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS Number</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminosilicate Refractory Ceramic Fiber</td>
<td>142844-00-6</td>
<td>80 - &lt; 90</td>
</tr>
<tr>
<td>REFRACTORY CERAMIC FIBERS * REFRACTORY CERAMIC FIBER (RCF) *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Temperature Insulation Wool (HTIW) * SYNTHETIC VITREOUS FIBERS (SVF) *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REFRACTORY CERAMIC FIBRES * Refractories, fibers, aluminosilicate *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man-Made Mineral Fiber (MMMF) * Man-Made Vitreous Fiber (MMVF) * Alumino Silicate Wool (ASW)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other components below reportable levels: 10 - < 20
This product contains Refractory Ceramic Fibers (RCF) or an RCF wrap or mat. IARC has classified RCFs as a possible human carcinogen, Group 2B. This classification was based on sufficient evidence of carcinogenicity in animals and no available data in humans. NTP classified respirable RCFs as reasonably anticipated carcinogens. Recent industry ongoing epidemiology studies show the general health of workers in the RCF industry was similar to that of workers in other dusty work environments. There have been no reports of mesothelioma, and the lung cancer rate appears similar to background rates, but the number of workers with a long latency period are too few for definitive conclusions. There was a small number of employees with an increased risk of developing pleural plaques (shadows along the inside of the chest wall). These plaques, however, are not known to cause symptoms or disability. HWI recommends that safe handling methods are followed, including air monitoring in areas wherever the potential exists for airborne fibers, minimizing airborne exposures through use of NIOSH approved respirators, and wearing protective clothing, gloves, and eye protection. For additional information please visit www.htiwcoalition.org Please review the workplace guidelines for additional handling information.

4. First aid measures
First aid measures for different exposure routes

<table>
<thead>
<tr>
<th>Exposure Route</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Move to fresh air. Call a physician if symptoms develop or persist.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Wash off with soap and water. Get medical attention if irritation develops and persists.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Rinse with water. Get medical attention if irritation develops and persists.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rinse mouth. Get medical attention if symptoms occur.</td>
</tr>
</tbody>
</table>

Most important symptoms and effects
Direct contact with eyes may cause temporary irritation.

Personal protection for first-aid responders
IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Notes to physician
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures
Extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

Extinguishing media to avoid
None.

Special fire fighting procedures
None.

Protection of fire-fighters
None.

6. Accidental release measures
Personal precautions
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

Spill clean-up methods
Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

7. Handling and storage
Handling
Technical measures
No specific recommendations.

Local and general ventilation
Provide adequate ventilation.

Precautions
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Safe handling advice
Avoid prolonged exposure. Should be handled in closed systems, if possible. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the SDS.

Storage
Technical measures
No specific recommendations.

Suitable storage conditions
Store locked up. Store away from incompatible materials (see Section 10 of the SDS).

Incompatible materials
Acids. Fluorine. Chlorine. For further information, please refer to section 10 of the SDS.

Safe packaging materials
Store in original tightly closed container.
8. Exposure controls/personal protection

Exposure limits

Indonesia. OELs (Minister of Manpower and Transmigration Regulation No. Per.13/MEN/X/2011 concerning Threshold Limit Values, Annex II)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminosilicate Refractory Ceramic Fiber (CAS 142844-00-6)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Inhalable particles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Dust.</td>
</tr>
</tbody>
</table>

Exposure guidelines

Recommended Exposure Guideline 0.5 Fiber/CC  There is no specific regulatory standard for RCF in the U.S. OSHA's "Particulate Not Otherwise Regulated (PNOR)" standard [29 CFR 1910.1000, Subpart Z, Air Contaminants] applies generally; Total Dust 15 mg/m³; Respirable Fraction 5 mg/m³.  The High Temperature Insulation Wool Coalition (HTIW) has sponsored comprehensive toxicology and epidemiology studies to identify potential RCF-related health effects [see Section 11 for more details], consulted experts familiar with fiber and particle science, conducted a thorough review of the RCF-related scientific literature, and further evaluated the data in a state-of-the-art quantitative risk assessment. Based on these efforts and in the absence of an OSHA PEL, HTIW has adopted a recommended exposure guideline, as measured under NIOSH method 7400B. The manufacturers' REG is intended to promote occupational health and safety through prudent exposure control and reduction and it reflects relative technical and economic feasibility as determined by extensive industrial hygiene monitoring efforts undertaken pursuant to an agreement with the U.S. Occupational Safety and Health Administration (OSHA).  OTHER OCCUPATIONAL EXPOSURE LEVELS (OEL)  Non-regulatory OEL decisions also vary. The evaluation of occupational exposure limits and determining their relative applicability to the workplace is best performed, on a case-by-case basis, by a qualified Industrial Hygienist.

Engineering measures

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.

Personal protective equipment

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

Hand protection  Wear appropriate chemical resistant gloves.

Eye protection  If contact is likely, safety glasses with side shields are recommended.

Skin and body protection  Use of an impervious apron is recommended.

Hygiene measures

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. Pressed fibrous material panel

Color  Not available.

Odor  Not available.

Odor threshold  Not available.

pH  Not available.

Melting point/freezing point  Not available.

Boiling point, initial boiling point, and boiling range  Not available.

Flash point  Not available.

Auto-ignition temperature  Not available.

Flammability (solid, gas)  Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)  Not available.
10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Stability
Material is stable under normal conditions.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials

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.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

11. Toxicological information

Acute toxicity
Not known.

Routes of exposure
Inhalation.

Symptoms
Direct contact with eyes may cause temporary irritation.

Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
Direct contact with eyes may cause temporary irritation.

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.

Carcinogenicity
Suspected of causing cancer.

ACGIH Carcinogens
Aluminosilicate Refractory Ceramic Fiber (CAS 142844-00-6) A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity
Aluminosilicate Refractory Ceramic Fiber (CAS 142844-00-6) 2B Possibly carcinogenic to humans.

Toxic to reproduction
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. 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 this product.

Bioaccumulation
No data available.

Mobility in soil
No data available for this product.

Other hazardous 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 methods/information
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.

Local disposal regulations
Not available.

14. Transport information

ADR
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

Applicable regulations

CWC (Law of RI No. 9 of 2008 re: Prohibition on the Use of Chemicals as Chemical Weapon, March 10, 2008)
Not regulated.

Dangerous Substances that Must be Registered (Regulation of the Minister of Health of the Republic of Indonesia, No. 472/Menkes/Per/V/1996)
Not regulated.

Import and Distribution Control of Hazardous Materials (Minister of Trade Regulation No. 75/M-DAG/PER/10/2014, Annex I)
Not listed.

Precursor Chemicals (Ministry of Industry and Trade Decree No. 647/MPP/Kep/10/2004 concerning Regulation on Import of Precursors, Attachment 1, Oct. 18, 2004)
Not regulated.

Prohibited Substances (Government Regulation No. 74 of 2001 regarding Management of Hazardous and Poisonous Substances, Attachment II, Table 1)
Not regulated.

Restricted Substances (Government Regulation No. 74 of 2001 regarding Management of Hazardous and Poisonous Substances, Attachment II, Table 2)
Not regulated.

Not regulated.

Hazardous Substances Approved for Use (Government Regulation No. 74 of 2001 regarding Management of Hazardous and Poisonous Substances, Attachment I)

Listed substances
Not regulated.

Listed substances / Allowed until 2040
Not regulated.

16. Other information

Issued by
Not available.
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.

Issue date

08-28-2017

Legend to abbreviations and acronyms used in the SDS

Not available.

References and sources for data used to compile the SDS

Not available.

Revision information

Composition / Information on Ingredients: Ingredients