



Printing date 05/26/2009

Reviewed on 05/26/2012

**1 Identification of substance**

· **Product details**

· **Trade name:** *INSBOARD 2300 LD*

· **Manufacturer/Supplier:**

*ANH Refractories Company  
100 Parkway Drive  
Moon Township, PA 15108*

General Phone: (412)375-6600

· **Emergency information:** CHEMTREC 24 HOUR EMERGENCY PHONE NUMBER: 1-800-424-9300.

**2 Composition/Data on components**

· **Chemical characterization**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Components:**

142844-00-6	refractory ceramic fibers (RCF)	Danger:  3.6/1A Warning:  3.3/2A, 3.8/3	60-100%
9005-25-8	Starch		5-10%
7631-86-9	silicon dioxide, chemically prepared		2.5-5%

· **Additional information:**

\*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. ANH 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.rcfc.net](http://www.rcfc.net). Please review the workplace guidelines for additional handling information.

**3 Hazards identification**

· **Hazard description:**

Toxic

· **Medical conditions aggravated by exposure to the product:** Asthma, chronic lung disease, and skin irritation.

· **Carcinogenicity Information:**

Refractory ceramic fibers are listed by IARC as Group 2B "Possibly Carcinogenic to Humans."

· **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

May cause cancer.

Irritating to eyes and respiratory system.

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· **NFPA ratings (scale 0-4)**



Health = 1  
Fire = 0  
Reactivity = 0

· **HMIS Classification**

HEALTH	*1
FIRE	0
REACTIVITY	0

Health: \*1  
Flammability: 0  
Reactivity: 0

· **GHS label elements**

Health hazard **Danger**

3.6/1A - May cause cancer.

Exclamation mark **Warning**

3.3/2A - Causes serious eye irritation.

3.8/3 - May cause respiratory irritation.

· **Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

· **Response:**

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

If eye irritation persists: Get medical advice/attention.

· **Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

· **Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Crystalline silica (cristobalite) may be formed in RCF products following sustained high temperature (>1800 Deg F; 982 Deg C) use.

**4 First aid measures**

· **After inhalation:** Move to fresh air; consult doctor if needed.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Flush eyes with water for 15 minutes. If irritation persists, consult a doctor.

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**After swallowing:**

This product is intended for industrial applications; in the unlikely event that this product is swallowed, consult a physician if any adverse medical conditions occur.

**5 Fire fighting measures**

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**7 Handling and storage**

- **Handling:**
- **Information for safe handling:** Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Storage:**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store product inside, out of extreme weather conditions.

**8 Exposure controls and personal protection**

· **Components with limit values that require monitoring at the workplace:**

**142844-00-6 refractory ceramic fibers (RCF)**

PEL 0.5 F/CC 8-hr. TWA\*\*

**9005-25-8 Starch**

PEL 15\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

REL 10\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction

TLV 10 mg/m<sup>3</sup>

· **Additional information:**

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/m<sup>3</sup>; Respirable Fraction 5 mg/m<sup>3</sup>.

\*\* The Refractory Ceramic Fibers Coalition (RCFC) has sponsored comprehensive toxicology and epidemiology studies to identify potential RCF-related health effects [see Section 11 for more details], consulted experts

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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, RCFC has adopted a recommended exposure guideline, as measured under NIOSH Method 7400 B. 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)**

RCF-related occupational exposure limits vary internationally. Regulatory OEL examples include: Australia – 0.5 f/cc; Austria – 0.5 f/cc; Canada – 0.5 to 1.0 f/cc; Denmark – 1.0 f/cc; France – 0.6 f/cc; Germany – 0.5 f/cc; Netherlands – 1.0 f/cc; New Zealand – 1.0 f/cc; Norway – 2.0 f/cc; Poland – 2.0 f/cc; Sweden – 1.0 f/cc; United Kingdom – 2.0 f/cc. Non-regulatory OEL examples include: ACGIH TLV 0.2 f/cc; RCFC REG 0.5 f/cc. The objectives and criteria underlying each of these 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.

**Personal protective equipment:****General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

**Breathing equipment:**

NIOSH approved respirators should be used if dust is present. A respiratory protection program should be implemented if exposures exceed OSHA PELs.

**Protection of hands:**

Protective gloves recommended

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection: Safety glasses with side shields recommended**

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### 9 Physical and chemical properties

· **General Information**

**Form:** Solid  
**Color:** According to product specification  
**Odor:** No specific odor.

· **Change in condition**

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density:** Not determined.

· **Solubility in / Miscibility with**

**Water:** Insoluble.

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

### 11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7631-86-9 silicon dioxide, chemically prepared

Oral	LD50	10000 mg/kg (rat)
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· **Primary acute effects:**

- **Skin contact:** No irritant effect.
- **Eye contact:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
 Irritant  
 Carcinogenic.

### 12 Ecological information

· **General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
 Danger to drinking water if even extremely small quantities leak into the ground.

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At present there are no ecotoxicological assessments.

**13 Disposal considerations**

- **Recommendation for Disposal of Product:**  
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.
- **Recommendation for Disposal of Uncleaned Packaging:** Reuse, recycle or treat as industrial waste.

**14 Transport information**

- **Transport/Additional information:** Not dangerous according to available information.

**15 Regulations**

· **SARA 313 TOXIC CHEMICALS**

No material listed in the components in Section 2 of this MSDS is on the SARA 313 list.

· **SARA 302 EXTREMELY HAZARDOUS SUBSTANCES**

No material listed in the components in Section 2 of this MSDS is on the SARA 302 list.

· **TSCA (Toxic Substances Control Act)**

This substance or all the ingredients of this product are on the Chemical Substances Inventory of the Toxic Substances Control Act (TSCA Inventory). The presence on this list does not require any legal reporting.

· **WHMIS Classification**

Class D - Division 2 - Sub Division A  
Untested mixture containing a very toxic material  
Class D - Division 2 - Sub Division B  
Untested mixture containing a toxic material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

142844-00-6	refractory ceramic fibers (RCF)	2B
7631-86-9	silicon dioxide, chemically prepared	3

· **NTP (National Toxicology Program)**

142844-00-6	refractory ceramic fibers (RCF)	R
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· **TLV (Threshold Limit Value established by ACGIH)**

9005-25-8	Starch	A4
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· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Classification according to EU-guidelines**

· **Hazard symbols:**



Toxic

· **Hazard-determining components of labeling:**

refractory ceramic fibers (RCF)

· **Risk phrases:**

May cause cancer.

Irritating to eyes and respiratory system.

· **Safety phrases:**

Avoid exposure - obtain special instructions before use.

When using do not eat or drink.

Do not breathe dust.

Avoid contact with eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After contact with skin, wash immediately with plenty of soap and water

Wear suitable protective clothing and gloves.

In case of accident or if you feel unwell, seek medical advice immediately.

· **Special labeling of certain preparations:**

**PRODUCT MAY CONTAIN REFRACTORY CERAMIC FIBERS (RCF) OR INCLUDE A WRAP OR MAT WHICH CONTAINS RCF:**

Prolonged or repeated inhalation of RCF dust may cause cancer.

Exposure of the product to high temperature may convert fibers to crystalline silica, an IARC and NTP listed carcinogen which can cause silicosis or cancer.

Use with adequate ventilation, wear safety glasses and dust-type respirator if dust is present.

In case of inhalation, remove victim to fresh air.

In case of eye contact, flush with water for 15 minutes.

· **National regulations:**

· **The following ingredients are known in the state of California to be a cancer risk (Proposition 65):**

142844-00-6 refractory ceramic fibers (RCF)

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:** Dylan L. Miller 412-375-6712

· **Creation date:** 08/25/2005

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MATERIAL SAFETY DATA SHEET

~~A.P. Green, Harrison-Walker and NARCO~~

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**Abbreviations and acronyms:**

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

MAL-Code: Måleteknisk Arbejdshygienisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**\* Data compared to the previous version altered.**

USA