

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

1 Identification

- **Product identifier**
- **Trade name:** INSWOOL-HP BULK
- **Other means of identification**
- **Article number:** 5830
- **Restrictions** Restricted to industrial or professional use.
- **Application of the substance / the mixture**
Refractory Ceramic Fiber (RCF) materials are used primarily in industrial high temperature insulating applications.
Conversion into wet and dry mixtures and articles.
Installation, removal (industrial and professional) / Maintenance and service life (industrial and professional)
- **Uses advised against**
Avoid dry cutting, blasting, or dust generation.
Spraying of dry product.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
HarbisonWalker International
2000 Park Lane Drive, Suite 400
Pittsburgh
Pennsylvania
15275
USA
- **Information department:**
SDS@thinkHWI.com
+33 (0)2 59 60 31 14

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**
Refractory ceramic fibers
- **Hazard statements**
H351 Suspected of causing cancer. Route of exposure: Inhalation.

(Contd. on page 2)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 1)

· Precautionary statements

- P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

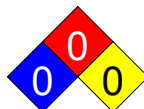
May cause temporary mechanical irritation to exposed eyes, skin or respiratory tract.
 Minimize exposure to airborne dust.
 Observe good industrial hygiene practices.
 Wash hands after handling.
 Store away from incompatible materials.
 Dispose of waste and residues in accordance with local authority requirements.

Although this blanket is a shaped article whose functionality is partly dependent on its form, it may, under normal conditions of use, release a hazardous chemical that could pose a health risk to users through inhalation.

· Information pertaining to particular dangers for man and environment:

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 0
 Fire = 0
 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 0
 Fire = 0
 Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· Classification according to (d)(1)(ii) of § 1910.1200

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

· Hazards not otherwise classified

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

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

· Dangerous components:

142844-00-6	Refractory ceramic fibers	≥80–≤100%
1344-28-1	aluminium oxide	≥3–≤5%

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 2)

Additional information:

The exact chemical identity and/or percentage (concentration) of the composition has been withheld as a trade secret.

4 First-aid measures

Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Handling of this material may cause mild mechanical temporary skin irritation. If this occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

After eye contact:

Do not rub eyes.

In case of contact, rinse eyes immediately with water for at least 1 minute. If symptoms persist, seek medical advice.

After swallowing: If symptoms persist consult doctor.

Most important symptoms and effects, both acute and delayed

Direct contact with eyes may cause temporary irritation.

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure.

These effects are usually temporary.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

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. For personal protection, see section 8 of the SDS.

Compressed air or dry sweeping should not be used for cleaning.

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Frequently clean the work area with vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up.

Dispose contaminated material as waste according to section 13.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

See Section 13 for disposal information.

(Contd. of page 3)

7 Handling and storage

- **Precautions for safe handling**
 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
 Open and handle receptacle with care.
 Prevent formation of dust.
- **Information about protection against explosions and fires:**
 Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· Control parameters

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

142844-00-6 Refractory ceramic fibers

 REL Long-term value: 0.5 fiber/cm³ - 8 hours

1344-28-1 aluminium oxide

 PEL Long-term value: 15*; 5** mg/m³
 *Total dust; ** Respirable fraction

 REL Long-term value: 10* 5** mg/m³
 as Al*Total dust**Respirable/pyro powd./welding f.

 TLV Long-term value: 1* mg/m³
 as Al; *as respirable fraction, A4

· Regulatory information

REL: Guide to Occupational Exposure Values (NIOSH RELs)

PEL: Guide to Occupational Exposure Values (OSHA PELs)

TLV: Guide to Occupational Exposure Values (TLV)

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

· Appropriate engineering controls

Use engineering controls such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs and materials handling equipment designed to minimize airborne fiber emissions.

· 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.

Washable or disposable clothing may be used. If possible, do not take unwashed clothing home. If soiled work clothing must be taken home, employees should be informed on best practices to

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 4)

minimize non-work dust exposure (e.g., vacuum clothes before leaving the work area, wash work clothing separately, and rinse washer before washing other household clothes.

· **Breathing equipment:**



Maintain adequate ventilation when dust is present.

Please consult applicable local legislation

Wear appropriate respiratory equipment (EN149:2009 FFP3)

Use a filter mask if dust concentrations exceed exposure limits.

Pursuant to NIOSH recommendations, N-95 respirators are appropriate for exposures up to 10 times the NIOSH Recommended Exposure Limit (REL). Regarding RCF, both the NIOSH REL and the industry REG have been set at 0.5 fibers per cubic centimeter of air (f/cm³). Accordingly, N-95 would provide the necessary protection for exposures up to 5 fibers/cm³. Further, the Respirator Selection Guide published by 3M Corporation, the primary respirator manufacturer, specifically recommends the use of N-95 respirators for RCF exposures. In cases where exposures are known to be above 5.0 fibers/cm³, 8-hour TWA, a filter efficiency of 100% should be used. Other factors to consider are the NIOSH filter series N, R or P -- (N) Not resistant to oil, (R) Resistant to oil and (P) oil Proof. These recommendations are not designed to limit informed choices, provided that respiratory protection decisions comply with 29 CFR 1910.134. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case-by-case basis, by a qualified Industrial Hygienist.

· **Protection of hands:**

Protective gloves



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:**



Wear safety glasses with side shields (or goggles).

· **Body protection:**



Standard industrial clothing is sufficient for room temperature installations (ISO 6942). Do not shake out work clothes. Do not remove dust with compressed air.

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 5)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Physical state	Solid
· Color:	White
· Odor:	uncharacteristic
· Odor threshold:	Not determined.
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Flammability:	Not determined.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH-value:	Not applicable.
· Viscosity:	
· Kinematic:	Not applicable.
· Dynamic:	Not applicable.
· Solubility in / Miscibility with	
· Water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure:	Not applicable.
· Vapor pressure:	
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not applicable.
· Particle characteristics	Not determined.

· Other information

· Appearance:	
· Form:	Solid in various forms
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Solvent content:	
· VOC content:	0.00 %
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not applicable.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 6)

- **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 dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:** Based on available data, the classification criteria are not met.
 - **Primary irritant effect:**
 - **on the skin:** Prolonged skin contact may cause temporary irritation.
 - **on the eye:** Direct contact with eyes may cause temporary irritation.
 - **Sensitization:** No sensitizing effects known.
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **Specific target organ toxicity - single exposure**
Based on available data, the classification criteria are not met.
 - **Specific target organ toxicity - repeated exposure**
Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Not applicable
 - **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
 - **Interactive effects** No interactive effects between components are known.
 - **Carcinogenic categories**
- | | | |
|---|---------------------------|----|
| · IARC (International Agency for Research on Cancer) | | |
| 142844-00-6 | Refractory ceramic fibers | 2B |
- | | | |
|--|---------------------------|-------------------------------------|
| · NTP (National Toxicology Program) | | |
| 142844-00-6 | Refractory ceramic fibers | Reasonably anticipated carcinogenic |
- | | |
|--|--|
| · OSHA-Ca (Occupational Safety & Health Administration) | |
| None of the ingredients is listed. | |
- **Alternative sources for toxicological information**
No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 7)

· **Other adverse effects**

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, IMDG, IATA** not regulated

· **UN proper shipping name**

· **DOT, IMDG, IATA** not regulated

· **Transport hazard class(es)**

· **DOT, ADN, IMDG, IATA**

· **Class** not regulated

· **Packing group**

· **DOT, IMDG, IATA** not regulated

· **Environmental hazards:**

Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Special precautions for user**

Not applicable.

· **UN "Model Regulation":**

not regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

(Contd. of page 8)

· Section 313 (Specific toxic chemical listings):

1344-28-1 aluminium oxide

· TSCA (Toxic Substances Control Act):

RCF is not required to be listed on the TSCA inventory.

1344-28-1 aluminium oxide

ACTIVE
· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65
· Chemicals known to cause cancer:

142844-00-6 Refractory ceramic fibers

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories
· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

1344-28-1 aluminium oxide

A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms


GHS08

· Signal word Warning
· Hazard-determining components of labeling:

Refractory ceramic fibers

· Hazard statements

H351 Suspected of causing cancer. Route of exposure: Inhalation.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/11/2025

Reviewed on 09/11/2025

Trade name: INSWOOL-HP BULK

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.* (Contd. of page 9)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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.

As produced, all RCF fibers are vitreous (glassy) materials which do not contain crystalline silica. Continued exposure to elevated temperatures over time may cause these fibers to devitrify (become crystalline). The first crystalline formation (mullite) begins to occur at approximately 985° C (1805° F). Crystalline phase silica may begin to form at approximately 1100° C (2012° F). When the glass RCF fibers devitrify, they form a mixed mineral crystalline silica containing dust. The crystalline silica is trapped in grain boundaries within a matrix predominately consisting of mullite. The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fiber chemistry and/or the presence of fluxing agents or furnace contaminants. The presence of crystalline phases can be confirmed only through laboratory analysis of the "hot face" fiber.

- **Contact:** SDS@thinkHWI.com
- **Date of previous version** 07/18/2025
- **Version number of previous version:** 31
- **Date of preparation** 09/11/2025
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - VOC: Volatile Organic Compounds (USA, EU)
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - NIOSH: National Institute for Occupational Safety
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - Carcinogenicity 2: Carcinogenicity – Category 2
- *** Data compared to the previous version altered.**