SAFETY DATA SHEET

Nische Solutions Soluble Fiber Blanket

1 IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Material/Product Name:
Soluble Fiber Blanket, Low Bio-persistence Blanket, AES Wool Blanket

Index Number: 650-016-00-2 Annex VI CAS Number: 436083-99-7

1.2 Chemical family:
Alkaline earth silicate (AES) fiber wool

1.3 Recommended use of the chemical and restrictions on use
Common Use: High temperature insulation, furnace lining, heat shields, sealing and gaskets
Primary Use: Heat insulating felt, industrial furnace, oven and kiln's lining, main feedstock for manufacturing soluble wool module and blocks
Secondary Use: Conversion into wet and dry mixtures and articles
Tertiary Use: Installation, removal, maintenance and service life on some industrial equipment.

1.4 Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party;

Nische Solutions.Inc
2020 10060 Jasper Ave Edmonton AB T5J1V9
+1 888-245-1778

1.5 Emergency phone number.

Phone: 1-888-245-1778
Language: English
8:00 – 17:00 (Monday to Friday)

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance

2.1.1 Classification according to regulation (EC) no 1272/2008

Not classified as hazardous according to Classification, Labelling and Packaging regulations (CLP) 1272/2008 EEC

2.2 Labeling elements
Not applicable

2.3 Other hazards which do not result in classification
None applicable chronic and possible health effects and no classification as the hazards materials

May trigger temporary mechanical irritation to skin,eyes and upper respiratory tract (nose, throat & lungs), but these irritation is temporary and not allergic reaction

Exposure to the fiber wool may cause moderate irritation to the eye Touch with the skin will cause the skin irritation Inhalation of airborne fiber will cause the upper respiratory tract

Well-equipped personal and industrial protective parts will greatly minimize the irritation and discomforts

3 COMPOSITION/ INFORMATION ON INGREDIENTS

This produce is made of AES wool (synthetic fibers, alkaline earth silicate).

Ingredient	CAS Number	% By weight
Alkaline-earth-silicate SiO2 61-68 %, CaO 27-32%, MgO 2-6 %, trace elements ≤1.2%	436083-99-7	100

4 FIRST AID MEASURES

4.1 Eye contact:
Flush eyes immediately with large amounts of clean water, rubbing eyes is prohibited for the sake of irritation increase, keep the eyelid away from the ball and the rinse should be lasted for at least 15 minutes, If irritation persists, seek medical treatment

4.2 Skin contact:
Take off the soiled clothing immediately and wash contacted areas with soap and water, rub and scratch is prohibited for irritation increase, using a skin cream or lotion after washing maybe helpful

4.3 Inhalation:
Leave the construction site for the open area with fresh air, seek medical attention if the irritation continues

4.4 Gastrointestinal Irritation:
If gastrointestinal tract irritation develops, move the person to a dust free area

4.5 Notes to Physician:
Skin and respiratory effects are resulted from the temporary mechanical irritation, the exposure of fiber will not trigger the allergic manifestations

5 FIRE FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media.
Use proper extinguishing media for the surrounding fire

5.2 Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products).
AES products are not combustible, packing materials maybe combustible

5.3 Special protective equipment and precautions for fire-fighters.
Wear full bunker gear including positive pressure self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures.

Avoid creating airborne dust. Maintain routine housecleaning procedures. Vacuum only with HEPA filtered equipment, if sweeping is necessary, use a dust suppressant and keep material in closed containers.

See Section 8 “Exposure Controls / Personal Protection” for exposure guidelines.

6.2 Methods and materials for containment and cleaning up.

Do not use compressed air for clean-up. Workers should wear gloves, goggles and approved respirator. Avoid clean-up procedures that could cause water pollution.

6.3 ENVIRONMENTAL PRECAUTIONS
Prevent further dust dispersion for example by damping the materials.
Do not flush spillage to drain and prevent from entering natural watercourses.

7 HANDLING AND STORAGE

7.1 Precautions for Handling:
Handle fiber carefully to reduce the airborne dust and limit use of power tools on less in conjunction with local exhaust. Used hand tools whenever possible. Frequently clean the work area with HEPA filtered vacuum or wet sweeping to minimize the accumulation of debris, do not use compressed air for clean-up

7.2 Conditions for Storage:
This product is stable under all conditions of storage. Store in original containers in the dry place. Keep container closed when not in use.

7.3 Empty Containers:
Do not reuse the residue maybe contained in the package

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Exposure Limits:

OSHA PEL:	Not Established
OSHA PNOR:	Total dust 15mg/m3; Respirable dust 5mg/m3
ACGIH TLV:	None established
ACGIH PNOC:	Inhalable particulate 10mg/m3 Respirable dust 3mg/m3

8.2 Manufacturer’s Recommendation:
Just like most industrial materials, it is prudent to reduce exposure to respirable dusts to the lowest possible level through the use of engineering controls such as ventilation and dust collection devices. Industrial hygiene standards and occupational exposure limits may vary between countries and local jurisdictions. Contact your employer to determine which exposure levels apply to your facility. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection. In the absence of such guidance, the supplier recommends to control occupational AZS fiber exposure to 1 f/cc or less.

8.3 Engineering controls:
Use local exhaust ventilation, point of generation dust collection, downdraft workstations, emission controlling tool designs and materials handling equipment to effectively minimize exposures to respirable dust.

8.4 Personal Protective Equipment:

PPE-Skin Protection:

Wear gloves, long-sleeved, loose-fitting clothing, and eye protection with side shields to prevent skin irritation.If possible, don't take unwashed and soiled clothing to home, If soiled work clothing must be taken home, employers should ensure employees are trained on the best practices to minimize or avoid non work dust exposure, the washer should be thoroughly rinsed before washing clothes of

other family members

PPE-Eye Protection:

Wear goggles or safety glasses with side shields in compliance with appropriate OSHA standards to prevent eye contact and prevent eye irritation,Do not touch eyes with soiled body parts or materials, the use of contact lenses is not recommended unless used in conjunction with appropriate eye protection

PPE-Respiratory Protection:

When it's insufficient to reduce the respirable dust exposure by effective engineering and/or administrative controls, the use of appropriate respiratory protection, in accordance with the requirements of OSHA 29 CFR 1910.134 and 29,CFR 1926.103, is recommended. For dust concentrations below the applicable exposure limit value, PPE is not required.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	white in fiber wool type, odorless. Product forms include loose bulk, blanket, board, paper, module, textile
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Boiling Point:	Not applicable
Melting Point:	1300 °C (2372 °F)
Bulk Weight (lbs/ft3)	4-10
Bulk Weight (kg/m3)	64-200
Water Solubility:	Slight
pH:	Not applicable
Evaporation rate:	Not applicable

10 STABILITY AND REACTIVITY

10.1 Chemical Stability:
Stable under conditions of normal use.

10.2 Conditions to avoid:
None.

10.3 Hazardous Polymerization:
None

10.4 Chemical Incompatibilities:
Strong acids should be avoided

10.5 Hazardous Decomposition Products
Upon heating above 900°C for sustained periods, the amorphous material begins to transform to mixtures of crystalline phases.

11 TOXICOLOGICAL INFORMATION

AES wool has been tested for the bio persistence using methods devised by the European Union. The study results exonerate CMS wools from carcinogen classification under the criteria listed in Nota Q of European Commission Directive 97/69/EU.

11.1 IRRITANT PROPERTIES

AES wool is negative when tested using approved methods (Directive 67/548/EEC, Annex 5, Method B4). Like all man-made mineral fibers and some natural fibers, fibers contained in this product can produce a mild mechanical irritation resulting in temporary itching or rarely, in some sensitive individuals, in a light temporary reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by mechanical effects.

11.2 OTHER ANIMAL STUDIES

These materials have been designed to allow rapid clearance from tissue. And this low bio- persistence has been confirmed in many studies using EU protocol ECB/TM/27(rev 7) and the German method specified in TRGS 905 (1999). When inhaled, even at very high doses, they do not accumulate to any level capable of producing a serious adverse biological effect. In lifetime chronic studies there was no exposure-related effect more than would be seen with any “inert” dust. Sub- chronic studies at the highest doses achievable produced, at worst, a transient mild inflammatory response. Fibers with the same ability to persist in tissue do not produce tumours when injected into the peritoneal cavity of rats

12 ECOLOGICAL INFORMATION

12.1 Toxicity

These products are insoluble materials that remain stable overtime and are chemically identical to inorganic compounds found in the soil and sediment; they remain inert in the natural environment.

No adverse effects of this material on the environment are anticipated.

12.2 Persistence and degradability
N/A

12.3 Bioaccumulative potential
N/A

12.4 Mobility in soil
N/A

12.5 Results of PBT and vPvB assessment
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects
No adverse ecological effects resulted from this product has been founded

13 DISPOSAL INFORMATION

13.1 WASTE TREATMENT METHODS
Please refer to the European list (Decision N° 2000/532/CE as modified) to identify your appropriate waste number, and insure the disposal complies with the national or regional regulations.

Consider any possible contamination during use, expert guidance should be sought.

Unless wetted, such a waste is normally dusty and so should be properly sealed in containers for disposal. At some authorized disposal sites, dusty waste may be treated differently in order to ensure they are dealt with promptly to avoid them being windblown.

13.2 Additional information
When disposing of waste and assigning European Waste Code (EWC) any possible contamination during use will need to be considered and expert guidance sought as necessary.

14 TRANSPORT INFORMATION

14.1 International:
Canadian TDG Hazard Class & PIN: Not regulated
Not classified as dangerous goods under ADR (Road), RID (Train), IATA (air) or IMDG (ship).

14.2 US Department of Transportation:

Hazard Class:	Not Regulated
Labels:	Not Applicable
Placards:	Not Applicable
UN Number:	Not Applicable
NA Number:	Not Applicable
Bill of Lading:	Product Name

15 REGULATORY INFORMATION

15.1 Safety health and environment regulations/legislation specific for the substances or mixtures EU regulations:

Regulation (EC) No 1907/2006 dated 18th December 2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1272/2008 dated 20th January 2009 on classification, labelling and packaging of substances and mixtures (OJ L 353)

Annex of Regulation (EU) 2015/830

Commission regulation (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labeling and packaging of substances and mixtures.

The 1st Adaptation to Technical Progress (ATP) to Regulation (EC) No 1272/2008 enters into force on 25 September 2009.

15.2 Protection of Workers

Shall be in accordance with several European Directives as amended and their implementations by the Member States:

A) Council Directive 89/391/EEC dated 12 June 1989 “on the introduction of measures to encourage improvements in the safety and health of workers at work” (OJEC (Official Journal of the European Community) L 183 of 29 June 1989, p.1).

B) Council Directive 98/24/EC dated 7 April 1998 “on the protection of workers from the risks related to chemical agents at work” (OJEC L 131 of 5 May 1998, p.11).

16 OTHER INFORMATION

16.1 Removal after service:

Under sustained and steady high temperature over 900°C, this material will possibly transform to crystalline silica in exposed portions. Prolonged or repeated exposure to respirable crystalline silica dust may lead to lung diseases. IARC has listed crystalline silica in Category 2A a probable carcinogen (“crystalline silica inhaled in the form of quartz or cristobalite from occupational source is carcinogenic to humans” IARC monograph 68, June 1997 p 210—211). The

permissible exposure limit(PEL) set by OSHA for respirable cristobalite is 0.05mg/m3.whenever possible follow section 8 procedures for exposure controls and personal protection.

16.2 ACRONYMS:

ACGIH: American Conference of Governmental Industrial Hygienists
CERCLA: Comprehensive Environmental Response, Compensation & Liability Act EPCRA: Emergency Planning and Community Right-to-Know Act of 1986
IARC: International Agency for Research on Cancer
NIOSH: National Institute for Occupational Safety and Health NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration PEL: Permissible Exposure Limit (OSHA)
PNOC: Particulate Not Otherwise Classified PNOR: Particulate Not Otherwise Regulated PSP: Product Stewardship Program
RCFC: Refractory Ceramic Fiber Coalition REL: Recommended Exposure Limit (NIOSH)
SARA: Superfund Amendments and Reauthorization Act
TITLE III: Emergency Planning and Community Right To Know Act TLV: Threshold Limit Values (ACGIH)
29 CFR1910.134: OSHA Respiratory Protection Standard

MSDS prepared by Thermstrong Coporation,Technical Department and HSE Specialist

DISCLAIMER:
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