



Product name	Thermal Defense Wrap
Product Code	AFTDW
Revision Date	29/11/11
Revision number	01
Ref	MSDS TDW 1



01 - SUBSTANCE IDENTIFICATION

Product name	Thermal Defense Wrap
Product Code	AFTDW
Use/description of product	<p>Thermal Defense Wrap is designed as a thermal insulation, heat shield or heat containment of penetrating services as part of a Built-In passive fire protection systems and firestops (please refer to specific technical data sheet for more information)</p> <p>The above mentioned product contain Alkaline-earth silicate wools (AES wools) Index number: 650-016-00-2 Annex VI Registration Number: 01-2119457644-32-xx</p>
Company name	<p>Astroflame (Fire Seals) Ltd. Intumescent House Unit 8 The IO Centre Stephenson Road Segensworth FAREHAM ENGLAND PO15 5RU</p> <p>Tel: 0800 023 2482 Fax:0800 023 2483 Int - Tel: +44 1329 844 500 Fax: +44 1329 844 600 eMail: sales@astroflame.com</p>



02 - COMPOSITION / INFORMATION ON INGREDIENTS

Components	%	CAS NUMBER	Index Number
AES wool (synthetic fibres, alk. Earth silicate) and a Aluminium Glass Fibre Scrim	100	436083-99-7	436083-99-7

Composition

Thermal Defense Wrap is an earth silicate (AES)* containing (SiO₂) 60-70% and a (Ca) + MgO) of 30-40%

*CAS definition: Alkaline earth silicate (AES) consisting of silica (50-82 wt %), calcia and magnesia (18-43 wt %) alumnia, titania and zirconia (less then 6 wt %), and trace oxides. None of the components are radioactive under the terms of European Directive Euratom 96/29

DESCRIPTION

Thermal Defense Wrap products are available in the form of complete rolls or cut to size


03 - HAZARD IDENTIFICATION

Classification of the substance/mixture	Not applicable
Labelling Elements	Not applicable
Other Hazards which do not result in classification	Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.


04 - FIRST AID MEASURES (SYMPTOMS)

Skin contact	Handling of this material may generate mild mechanical temporary skin irritation. If it occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.
Eye contact	In case of eye contact flush abundantly with water@ have eye bath available. Do not rub eyes.
Nose and throat	If these become irritated move to a dust free area, drink water and blow nose. If symptoms persist, seek medical advice.


05 - FIRST AID MEASURES (ACTION)

Skin contact	Wash with plenty of soap and water
Eye contact	Bathe the eye with running water for 15 minutes. Seek medical attention.
Ingestion	Wash out mouth with water and do not induce vomiting. Seek medical attention if feeling unwell.
Inhalation	Remove to fresh air and rest. If symptoms persist seek medical advice.


06 - FIRE-FIGHTING MEASURES

Non-combustible (does not burn) product.

Packaging and surrounding materials may be combustible.

Use extinguishing agent suitable for surrounding combustible materials.



07 - ACCIDENTAL RELEASE MEASURES

Where abnormally high dust concentrations occur, provide the workers with appropriate protective equipment as detailed in section 8

Restore the situation to normal as quickly as possible.

Prevent further dust dispersion for example by damping the materials

Pick up large pieces and use a vacuum cleaner fitted with high efficiency filter (HEPA)

If brushing used, ensure that the area is wetted down first.

Do not use compressed air for clean-up.

Do not allow to be wind blown.

Do not flush spillage down the drain.

For waste disposals refer to section 13



08 - HANDLING AND STORAGE

Handling/Techniques to reduce dust emissions during handling

Handling	<p>Handling can be a source of dust emission. The process or processes should be designed to limit the amount of handling. Whenever possible, handling should be carried out under controlled conditions (i.e. use dust exhaust system)</p> <p>Regular good house keeping will minimise secondary dust dispersal.</p>
Storage	<p>Store in original packaging in dry area whilst awaiting use.</p> <p>Always use sealed and visibility labelled containers</p> <p>Avoid damaging containers.</p>



09 - EXPOSURE CONTROL / PERSONAL PROTECTION

Hygiene standards and exposure limits

Industrial hygiene standards and occupational exposure limits may vary between countries and local jurisdictions. Check which exposure levels apply to your facility, and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection. Examples of exposure limits applying (in January 2010) to mineral wools in different countries are given below:

Country	Exposure Limit	Source
Germany	3 mg/m ³	TRGS 900
France	1.0 f/ml	Circulaire DRT No 95-4 du 12.01.95
UK	2.0 f/ml and 5 mg/m ³	HSE – EH40 – Workplace Exposure Limit

*time weighted average concentrations of airborne respirable fibres measured over 8 hours by the conventional membrane filter method or the total inhalable dust using standard gravimetric techniques.

ENGINEERING CONTROLS:

Review your application(s) in order to identify potential sources of dust exposure.

Local exhaust ventilation, which collects dust at source, can be used. For example down draft tables, emission controlling tools and material handling equipment.

Keep the workplace clean. Use a vacuum cleaner fitted with an HEPA filter; avoid brushing and using compressed air.

PERSONAL PROTECTION EQUIPMENT:

Skin Protection	Wear gloves and work clothes, which are loose fitting at the neck and wrists. Soiled clothes should be cleaned to remove excess fibres before being taken off (e.g. use vacuum cleaner, not compressed air)
Eye Protection	As necessary wear goggles or safety glasses with side shields.
Respiratory Protection	For dust concentrations below the exposure limit value, RPE is not required but FFP2 respirators may be used on a voluntary basis. For short term operations where excursions are less than ten times the limit value use FFP2 respirators. In case higher concentrations or where the concentration is not known, please seek advice from your company and/or supplier.
Information and Training of Workers	Workers should be trained on good working practices and informed on applicable local regulations.
Environmental Exposure Controls	Refer to local, national or European applicable environmental permitted standards for release to air, water and soil.



10 -

PHYSICAL & CHEMICAL PROPERTIES

Odor and appearance	White, fibrous material with Aluminium Foil Face to one side
Chemical family	Calcium Magnesium Silicate Fibres
Boiling point	Not Applicable
Water solubility (%)	Less than 1 mg/l
Melting point	>1200° C
Relative density	50-240 KG/M3
Vapor pressure:	High
ph:	Not Applicable
Vapour Density (Air = 1):	Not Applicable
% Volatile:	Not Applicable
Molecular formula:	Not Applicable



11 - STABILITY AND REACTIVITY

Conditions or materials to avoid	None
Decomposition products	Upon heating above 900oC for sustained periods, this amorphous material begins to transform to mixtures of crystalline phases. For further information please refer to section 16.



12 - TOXICOLOGICAL INFORMATION

Irritant Properties:

When tested using approved methods (Directive 67/548EC, Annex V, Method B4), fibres contained in this material give negative results. All man made material fibre, like some natural fibres, and produce a mild irritation resulting in itching or rarely, in some sensitive individuals, in slight reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by a temporary mechanical effect.

These materials have been designed to allow rapid clearance from lung tissue. And this low biopersistance has been confirmed in many studies on AES using EU protocol ECB/TM/27(rev 7)

When inhaled, even at very high does, 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.

Subchronic studies at the highest doses achievable produced, at worst, a transient mild inflammatory response; fibres with the same ability to persist in tissue do not product tumours when injected into the peritoneal cavity of rats.



13 - ECOLOGICAL INFORMATION

These products are inert materials, which remain stable overtime.
No adverse effects of this material on the environment are anticipated.



14 - DISPOSAL CONSIDERATIONS

Waste from these products are classed as non hazardous and may generally be disposed of at landfill, which has been licensed for this purpose. Please refer to the European list (decision no 2000/532/CE as modified) to identify your appropriate waste number, and insure national and or regional regulation are complied with. Taking into account 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 clearly labelled containers for disposal. At some authorised disposal sites, dusty waste may be treated differently in order to ensure they are dealt with promptly to avoid them being wind blown. Check for national and/or regional regulations, which may apply.



15 - TRANSPORT

Transport hazards

Not classified as dangerous goods under relevant international transport regulations (ADR, RID, IATA, IMDG, AND refer section 16 "definitions")

Ensure that dust is not blown during transportation.

ADR / RID	
UN no.	
Shipping name	"NOT SUBJECT TO ADR"
IMDG / IMO	
UN no.	
IATA / ICAO	
UN no.	



16 - REGULARITY INFORMATION

1. FIBRE TYPE DEFINITION UNDER DIRECTIVE 67/548/EEC

According to directive 67/548/EEC the fibre contained in this product is a mineral wool belonging to the group of "man-made vitreous (silicate) fibres with random orientation with alkaline earth oxide (Na₂O+K₂O+CaO+MgO+BaO) content greater to 18% by weight."

Under criteria listed in nota Q of directive 67/548/EEC, fibres contained in the products listed in the title are exonerated from carcinogen classification because of low pulmonary biopersistence measured by the methods specified in European Union and German regulations (EU protocol ECBT/TM/27 Rev7

31st adaptation to technical progress of directive 67/548/EEC of 15 January 2009 has removed skin irritancy classification for man-made vitreous (silicate) wools.

2. FIBRE TYPE DEFINITION ACCORDING TO REGULATION (EC) NO 1272/2008 AMENDING AND REPEALING DIRECTIVES 67/548/EEC AND 1999/45/EC, AND AMENDING REGULATION (EC) NO1907/2006

This regulation aims at incorporating the GHS criteria into the EU community law.

Under 1.1.3.1. (Nota Q) of Annex VI of regulation (EC) 1272/2008 the classification as a carcinogen 2 needs not apply on the basis of short term biopersistence test by intratracheal installation showing a half life of less than 40 days for fibres longer than 20 µm



16 - REGULARITY INFORMATION

1st adaptation of technical progress of regulation (EC) No 1272/2008 of 10 August 2009 has removed skin irritancy classification for man-made vitreous (silicate) wools.

Fibres contained in this product are therefore free of any classification and do not require labelling under CLP regulation.

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) L183 of 29 June 1989 p. 1)

b) council directive 98/24/EC dated 4 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)

OTHER POSSIBLE REGULATIONS

Member states are in charge of implementing European Directives into their own national regulation within a period of time normally given in the Directive. Member States may impose more stringent requirements. Please always refer to any national regulation
This applies for sales in the European Union



17 - ADDITIONAL INFORMATION

USEFUL REFERENCES

(the directives which are cited must be considered in their amended version)

- 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) L 183 of 19 June 1989, p.1)
 - Regulation (EC) no 1907/2006 dated 18 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 L353)
 - Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress for the 23rd time Council Directive 67/548/EEC (OJEC of 13th December 1997, L343)
 - Council Directive 98/24/EC of 7 April 1998 "On the protection of the health and safety of workers from the risks related to chemical agents at work" (OJEC L 131 of 5 May 1998, P11)
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**17 - ADDITIONAL INFORMATION****DEFINITIONS:**

ADR - Transport by road, council directive 94/55/EC

IMDG - Regulations relating to transport by sea

RID - transport by rail, Council Directive 96/49/EC

ICAO/IATA - Regulations relating to transport by air

ADN - European agreement concerning the international carriage of dangerous goods by Inland Waterways

PRECAUTIONARY MEASURES TO BE TAKEN AFTER SERVICE UPON REMOVAL:

In almost all applications high temperature insulating wools product (HTIW) are used as an insulating material helping to maintain temperature at 900oC or more in a closed space. As produced, TDW 1 fibres are Viteous (glassy) materials which, upon continued exposure to elevated temperatures (above 900oC) might de-vitrify. The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fibre chemistry and/or the presence of fluxing agents. As only a thin layer of the insulation hot face side is exposed to high temperature, respirable dust generated during removal operations does not contain detectable levels of crystalline silica (CS)

In applications where the material is heat soaked, duration of heat exposure is normally short and a significant devitrification allowing CS to build up does not occur. This is the case for waste mould casting for instance.

Toxicological evaluation of the effect of the presence of CS in artificially heated HTIW material has not shown any increased toxicity in vitro and in vivo. The results from different combinations of factors like increased brittleness of fibres, or microcrystals embedded in the glass structure of the fibre and therefore not biologically available may explain the lack of toxicological effects.

IARC evaluation as provided in Monograph 68 is not relevant as CS is not biologically available in after service HTIW.

High Concentrations of fibres and other dusts may be generated when after-service products are mechanically disturbed during operations such as wrecking. Therefore ECFIA recommended:

- control measures are taken to reduce dust emissions; and
- all personnel directly involved wear an appropriate respirator to minimise exposure and comply with local regulatory limits.

CARE PROGRAMME ("Controlled and Reduced Exposure")

The trade association representing the European high temperature insulation wool industry (ECIFA) has undertaken an extensive hygiene programme for high temperature insulation wool (HTIW).

The objectives are twofold:

- to monitor work place dust concentrations at both manufactures' and customers' premises,
- to document manufacturing and use of HTIW products from an industrial hygiene perspective in order to establish appropriate recommendations to reduce exposures.

WEBSITES:

For more information connect to:

European Industry Association HTIW (ECFIA): 3, Rue du Colonel Moll, 75017 Paris Tel.

+33 (0) 6 31 48 74 26

www.ecfia.eu

**17 - ADDITIONAL INFORMATION****REVISION SUMMARY:**

Section 1- addition of identified uses, change of emergency contact number, addition of product identifiers
Section 2- reformatted according to Regulation (EC) No 1907/2006
Section 3 – addition of classification according to (EC) No 1272/2008
Section 15 – reformatted according to Regulation (EC) No 1907/2006

NOTE:

The Directives and subsequent regulations detailed in this Safety Data Sheet are only applicable to the European Union (EU) Countries and not to countries outside the EU.

NOTICE:

The information presented here in is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.
