SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Trade name	:	Saffil HDHP
Chemical name	:	Polycrystalline wools (PCW)
CAS-No.	:	675106-31-7
REACH registration No.	:	01-2119456884-25-0003

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : For industrial use within high temperature applications.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier
Alkegen (formerly Unifrax)
Mill Lane, Rainford
UK– WA11 8LP St Helens, Merseyside
United Kingdom
T + 44 (0) 1744 88 7600
www.alkegen.com

Email competent person
reachsds@alkegen.com

Distributor
Alkegen (formerly Unifrax)
Kleinreinsdorf 62
DE– 07989 Teichwolframsdorf
Germany
T + 49 (0) 366 24 40020 - F + 49 (0) 366 24 40099

Distributor
Alkegen (formerly Unifrax)
17 Rue Antoine Durafour
42420 Lorette
France
T +33 (0) 477 737 032 - F +33 (0) 477 733 991

Distributor
Alkegen (formerly Unifrax)
Shaftsbury Street
DE23 8XA Derby
United Kingdom
T +44 (0) 1332 331808

Distributor
Alkegen (formerly Unifrax)
Ruská 311, Pozorka
CZ– 417 03 Dubí 3
Czech Republic
T + 42 (0) 417 800 356 - F + 42 (0) 417 539 838

Distributor
Alkegen (formerly Unifrax)
Via Volonterio 19
21047 Saronno (VA)
Italy
T +39 02 967 01 808 - F +39 02 962 5721

Distributor
Alkegen (formerly Unifrax)
Cristobal Bordiu 20
ES– 28003 Madrid
Spain
T + 34 91 395 2279 - F + 34 91 395 2124

1.4. Emergency telephone number

Emergency number : Occupational Hygiene and CARE: Tel: + 44 (0) 1744 887603; Email: reachsds@alkegen.com; (8.15-17.10 h); Language : English

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Health Service (NHS) England / Scotland / Wales / Northern Ireland	-	England / Scotland: 111 Wales: 111 or 0845 46 47 Northern Ireland: call your local General Practitioner. For life-threatening emergencies: call 999 for an ambulance.	24 h medical helpline for general public

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Other hazards which do not result in classification : May cause mechanical irritation to the skin, eyes and respiratory system.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Polycrystalline wools (PCW)	CAS-No.: 675106-31-7 REACH-no: 01-2119456884-25-0003	-	Not classified

Comments : PCW can also be identified by a combination of CAS Numbers: 1344-28-1 (fibrous forms of Aluminium Oxide), 7631-86-9 (Silica, non-crystalline), or 1302-93-8 (Mullite).

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : When in doubt or if symptoms are observed, get medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Irritating to the respiratory system and mucous membranes. mechanical irritation.
Symptoms/effects after skin contact : May cause slight temporary irritation. mechanical irritation.
Symptoms/effects after eye contact : May cause slight temporary irritation to ocular mucous membranes. mechanical irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : The product is not flammable. Foam. Dry powder. Carbon dioxide. Water spray.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Non flammable.
Explosion hazard : Product is not explosive.
Hazardous decomposition products in case of fire : None.

5.3. Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid dust formation. Do not breathe dust. Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

Protective equipment : Concerning personal protective equipment to use, see section 8.
Emergency procedures : Prohibit unauthorized persons.

6.1.2. For emergency responders

Protective equipment : Ensure adequate ventilation. Concerning personal protective equipment to use, see section 8.
Emergency procedures : Manipulations are to be done only by qualified and authorised persons.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Minimise generation of dust. Dust can be vacuumed with a vacuum cleaner containing a HEPA (High Efficiency Particulate Air) filter.
Other information : Disposal must be done according to official regulations.

6.4. Reference to other sections

See section 7. See Section 8. See Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Ensure good ventilation of the work station. Use personal protective equipment as required. Do not breathe dust. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Clean contaminated areas thoroughly.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Product must only be kept in the original packaging. Store tightly closed in a dry and cool place.

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

For professional users only. See Section 8.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Polycrystalline wools (PCW) (675106-31-7)	
United Kingdom - Occupational Exposure Limits	
Local name	MMMF (Machine-made mineral fibre)
WEL TWA (OEL TWA) [1]	5 mg/m³ (except for refractory ceramic fibres and special purpose fibres)
WEL TWA (OEL TWA) [2]	2 fibers/ml (except for refractory ceramic fibres and special purpose fibres)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses with side shields

8.2.2.2. Skin protection

Skin and body protection:
Wear proper protective equipment

Hand protection:
Leather protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
Dust production: dust mask with filter type P2

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

Other information:
Do not eat, drink or smoke when using this product. Do not take working clothes home. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	white.
Appearance	:	Fibres.
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	> 1800 °C
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Non flammable.
Explosive properties	:	Not explosive.
Oxidising properties	:	Non oxidizing.
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not self-igniting
Decomposition temperature	:	Not available
pH	:	Not applicable
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Water: < 1 mg/l
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	3 – 3.5 g/cm³
Relative density	:	Not available
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Other properties	:	Length weighted geometric mean diameter of fibres contained in the product: 3-4 µm

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

No additional information available.

10.5. Incompatible materials

None.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

Polycrystalline wools (PCW) (675106-31-7)	
LD50 oral rat	> 4000 mg/kg bodyweight (OECD 407 method)

Skin corrosion/irritation	:	Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
Additional information	:	(OECD 404 method)
Serious eye damage/irritation	:	Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
Additional information	:	(OECD 492 method)
Respiratory or skin sensitisation	:	Not classified (Based on available data, the classification criteria are not met)
Additional information	:	(OECD 429 method)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Additional information	:	(OECD 471 method) (OECD 487 method)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Additional information	:	(OECD 451 method)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	Not classified (Not relevant)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Other information : Chronic effects:
Lifetime rat inhalation studies of polycrystalline fiber show that at the maximum dose level tested, there was no evidence of lung cancer, lung fibrosis or any other significant adverse effect. Intraperitoneal, intratracheal and intrapleural studies in rats, together with two in vitro tests, have all shown negative results. Despite some study limitations, it is important to note the consistent lack of carcinogenic response in animal studies.

In 1988, the International Agency for Research on Cancer (IARC) considered the carcinogenicity of several groups of fibers. One grouping they considered was a poorly defined collection of disparate fiber types [polycrystalline fiber, refractory ceramic fiber (referred to as RCF) and single crystal whiskers] into a broad, single category they termed “ceramic fibers”. The IARC monograph clearly indicated that test data specific to polycrystalline fibers were negative, but according to the IARC classification principles, positive results with other fiber types led to the conclusion that all fibers in the group should be considered as possible human carcinogens (IARC Category 2B). In a subsequent monograph on MMVF (2002), IARC did not specifically re-evaluate polycrystalline fiber. The Annual Report on Carcinogens prepared by the National Toxicology Program (NTP), (latest edition) classified “ceramic fibers (respirable size)” as reasonably anticipated to be carcinogens.

As produced most polycrystalline fibers, including Saffil, have fiber diameters too large to be respirable. Numerous scientific studies suggest that the potential toxicity of a respirable fiber is directly related to bio-persistence (the length of time it take for the fiber to clear the lung). Based on limited in-vitro laboratory analysis, which measure the dissolution rate of fibers in simulated lung fluid, polycrystalline fibers are known to be relatively durable.
Data from respiratory surveillance studies are not available for PCW workers. In a small cohort of workers exposed to PCW with historical co-exposures to RCF and other fibers, there was no evidence of interstitial lung disease on chest x-rays nor an accelerated rate of loss of lung function on pulmonary function testing. Symptom responses could not be attributed to or excluded from exposure to PCW as a consequence of the prior fiber exposures.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

Polycrystalline wools (PCW) (675106-31-7)	
LC50 - Fish [1]	> 50 mg/l (96 h; LL50; Oncorhynchus mykiss; (OECD 203 method))
EC50 - Crustacea [1]	> 50 mg/l (48 h; EL50; Daphnia magna; (OECD 202 method))
ErC50 algae	> 50 mg/l (72 h; EL50; Pseudokirchneriella subcapitata; (OECD 201 method))

12.2. Persistence and degradability

Polycrystalline wools (PCW) (675106-31-7)	
Persistence and degradability	Not applicable.

12.3. Bioaccumulative potential

Polycrystalline wools (PCW) (675106-31-7)	
Bioaccumulative potential	Not applicable.

12.4. Mobility in soil

Polycrystalline wools (PCW) (675106-31-7)	
Ecology - soil	Not applicable.

12.5. Results of PBT and vPvB assessment

Polycrystalline wools (PCW) (675106-31-7)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : European waste catalogue.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not dispose of with domestic waste.
European List of Waste (LoW) code : 17 06 04 - insulation materials other than those mentioned in 17 06 01 and 17 06 03

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
IATA	International Air Transport Association
IMDG	International Maritime Code for Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PNEC	Predicted No-Effect Concentration
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit

Data sources : Information provided by the manufacturer. European Chemicals Agency, http://echa.europa.eu/.

Other information : reachsds@alkegen.com.

. CARE PROGRAMME
ECFIA, representing the high temperature insulation wool (HTIW) industry, has undertaken an extensive industrial hygiene programme to provide assistance to the users of all products containing HTIW.
The objectives are twofold:
• to monitor workplace dust concentrations at both manufacturers' 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.

KFT SDS EU 06

The information presented on this SDS (1) provides details on material identity, manufacturer/supplier information, hazard characterization and prevention, emergency response and other specialized information, (2) is considered to be accurate to the best of our knowledge, information and good faith belief as of the date of publication, (3) is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release of the material named, (4) should be read and used in conjunction with the company's relevant literature, (5) relates only to the specific material designated and may not be valid for such material used in combination with any other material or process and (6) is provided without warranty, expressed or implied, in law or in fact, of merchantability or fitness for a particular purpose. This document does not constitute a product specification and should not be relied on as such. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product.