

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

#### 1.1. Product identifier

Product form	: Mixture
Product name	: Fermet 78SF
UFI	: NC1E-70N8-G00C-PF50
CAS-No.	: Mixture
Product code	: 4710
Product group	: Finished Good
Other means of identification	: Alumina Cement Bonded Castable

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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec	: Industrial use
Use of the substance/mixture	: Refractory

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

Resco Products (UK) Limited  
Newbold Works, Melbourne Road, Lount  
LE65 1PL Ashby-de-la-Zouch  
England  
T 44 (0) 1530 222694

[UK.SDS@RescoProducts.com](mailto:UK.SDS@RescoProducts.com) - [www.RescoProducts.com](http://www.RescoProducts.com)

#### 1.4. Emergency telephone number

Emergency number	: EMERGENCY ONLY (CHEMTREC) USA & Canada 1-800-424-9300 Outside USA & Canada +1 703-741-5970
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Specific target organ toxicity – Repeated exposure, Category 2 H373

Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

This product contains Quartz (Fine Fraction) between 0.1 to 10% and is classified as STOT RE 2 according to criteria defined in the Regulation EC 1272/2008 and does not meet the criteria for classification as harmful according to directive 67/548/EC.

#### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS08

GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H373 - May cause damage to organs through prolonged or repeated exposure (inhalation).

Precautionary statements (CLP)

: P260 - Do not breathe dust.  
P280 - Wear eye protection, protective gloves.  
P284 - In case of inadequate ventilation wear respiratory protection.  
P314 - Get medical advice/attention if you feel unwell.

#### 2.3. Other hazards

Other hazards which do not result in classification : Irritating to eyes and skin.

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

##### Component

aluminium oxide, non-fibrous (1344-28-1)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
crystalite, $1\% \leq \text{conc respirable crystalline silica} < 10\%$ (14464-46-1)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

The mixture does not contain substance(s) 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 at a concentration equal to or greater than 0,1 %

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
aluminium oxide, non-fibrous	CAS-No.: 1344-28-1 EC-No.: 215-691-6	75 – 95	Not classified
Calcium Aluminate Cement	CAS-No.: 65997-16-2 EC-No.: 266-045-5	1 – 5	Not classified
crystalite, 1%≤conc respirable crystalline silica<10%	CAS-No.: 14464-46-1 EC-No.: 238-455-4	0.1 – 0.5	STOT RE 2, H373

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Gently wash with plenty of soap and water.
First-aid measures after eye contact	: IF IN EYES: 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. Get medical advice/attention if you feel unwell. Do not induce vomiting.

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

Symptoms/effects after inhalation	: May cause cancer by inhalation. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes eye irritation.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: In case of fire, all extinguishing media allowed.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non-flammable.
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### 5.3. Advice for firefighters

Firefighting instructions	: No specific fire-fighting instructions required.
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

#### 6.1.1. For non-emergency personnel

Protective equipment	: Avoid creating or spreading dust.
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#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
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### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe dust.
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	: Store this product in a dry location where it can be protected from the elements.
Incompatible products	: Strong bases. Strong acids.

### 7.3. Specific end use(s)

No additional information available

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

###### aluminium oxide, non-fibrous (1344-28-1)

###### Belgium - Occupational Exposure Limits

OEL TWA	1 mg/m <sup>3</sup>
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###### France - Occupational Exposure Limits

VME (OEL TWA)	10 mg/m <sup>3</sup>
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###### United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> 4 mg/m <sup>3</sup>
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###### USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	1 mg/m <sup>3</sup> respirable dust
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###### crystalobalite, 1%=<conc respirable crystalline silica<10% (14464-46-1)

###### Belgium - Occupational Exposure Limits

OEL TWA	0.05 mg/m <sup>3</sup>
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###### France - Occupational Exposure Limits

VME (OEL TWA)	0.05 mg/m <sup>3</sup> (La valeur limite concerne la fraction alvéolaire)
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###### Netherlands - Occupational Exposure Limits

TGG-8u (OEL TWA)	0.075 mg/m <sup>3</sup> (respirabele fractie)
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###### United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	0.1 mg/m <sup>3</sup>
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###### USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	0.025 mg/m <sup>3</sup> (Respirable fraction)
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##### 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:

Provide adequate ventilation to minimize dust concentrations.

##### 8.2.2. Personal protection equipment

###### Personal protective equipment:

Avoid all unnecessary exposure.

###### 8.2.2.1. Eye and face protection

###### Eye protection:

Chemical goggles or safety glasses

###### 8.2.2.2. Skin protection

###### Skin and body protection:

Wear suitable protective clothing

###### Hand protection:

Wear protective gloves.

###### 8.2.2.3. Respiratory protection

###### Respiratory protection:

Wear appropriate mask

###### 8.2.2.4. Thermal hazards

No additional information available

##### 8.2.3. Environmental exposure controls

No additional information available

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Solid

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Color	: Gray.
Appearance	: Granular mixture.
Odor	: odorless.
Odor threshold	: Not available
Melting point	: > 1650 °C
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not flammable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: ≈ 10.5
pH solution	: 10 %
Viscosity, kinematic	: Not applicable
Solubility	: Slightly soluble.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapor pressure	: Not available
Vapor pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 2.9
Relative vapor 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

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Hydraulic setting.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Avoid dust formation

### 10.5. Incompatible materials

Strong acids; Strong bases

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### aluminium oxide, non-fibrous (1344-28-1)

LD50 oral rat	> 15900 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 2.3 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
Skin corrosion/irritation	: Not classified

#### aluminium oxide, non-fibrous (1344-28-1)

pH	9 – 10.5 (aqueous suspension, 33 %)
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#### Calcium Aluminate Cement (65997-16-2)

pH	≤ 13
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#### cristobalite, 1%=<conc respirable crystalline silica<10% (14464-46-1)

pH	6 – 7
Serious eye damage/irritation	: Not classified

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<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
pH	9 – 10.5 (aqueous suspension, 33 %)
<b>Calcium Aluminate Cement (65997-16-2)</b>	
pH	≤ 13
<b>crystalite, 1%=&lt;conc respirable crystalline silica&lt;10% (14464-46-1)</b>	
pH	6 – 7
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
<b>crystalite, 1%=&lt;conc respirable crystalline silica&lt;10% (14464-46-1)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure (if inhaled).
Aspiration hazard	: Not classified
<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
Viscosity, kinematic	Not applicable (solid)
<b>11.2. Information on other hazards</b>	
No additional information available	
<b>SECTION 12: Ecological information</b>	
<b>12.1. Toxicity</b>	
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
LC50 - Fish [1]	> 100 mg/l (96 h, Salmo trutta, Literature study)
EC50 - Crustacea [1]	> 100 mg/l (48 h, Daphnia magna, Literature study)
<b>12.2. Persistence and degradability</b>	
<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
Persistence and degradability	Not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
<b>crystalite, 1%=&lt;conc respirable crystalline silica&lt;10% (14464-46-1)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>12.3. Bioaccumulative potential</b>	
<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
Bioaccumulative potential	No data available.
<b>crystalite, 1%=&lt;conc respirable crystalline silica&lt;10% (14464-46-1)</b>	
Bioaccumulative potential	No data available.
<b>12.4. Mobility in soil</b>	
<b>aluminium oxide, non-fibrous (1344-28-1)</b>	
Surface tension	No data available in the literature
Ecology - soil	No data available.

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### crystalobalite, 1%=<conc respirable crystalline silica<10% (14464-46-1)

Ecology - soil : No data available.

#### 12.5. Results of PBT and vPvB assessment

##### Component

aluminium oxide, non-fibrous (1344-28-1)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
crystalobalite, 1%≤conc respirable crystalline silica<10% (14464-46-1)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, 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

Product/Packaging disposal recommendations : Do not discharge into the sewer.

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

#### 14.1. UN number or ID number

Not regulated for transport

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Proper Shipping Name (IATA) : Not regulated  
Proper Shipping Name (RID) : Not regulated

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR) : Not regulated

##### IMDG

Transport hazard class(es) (IMDG) : Not regulated

##### IATA

Transport hazard class(es) (IATA) : Not regulated

##### RID

Transport hazard class(es) (RID) : Not regulated

#### 14.4. Packing group

Packing group (ADR) : Not regulated  
Packing group (IMDG) : Not regulated  
Packing group (IATA) : Not regulated  
Packing group (RID) : Not regulated

#### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

#### 14.6. Special precautions for user

##### Overland transport

Not regulated

##### Transport by sea

Not regulated

##### Air transport

Not regulated

##### Rail transport

Not regulated

#### 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)

Contains no REACH substances with Annex XVII restrictions

###### REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances.

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### REACH Candidate List (SVHC)

Contains no REACH candidate substance

### PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 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 drug precursors)

### 15.1.2. National regulations

#### France

Professional diseases	
Code	Description
RG 25	Diseases resulting from the inhalation of mineral dust containing crystalline silica (quartz, cristobalite, tridymite), crystalline silicates (kaolin, talc), graphite or coal.

#### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

#### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

#### Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Other information : Report language name. English. In the event of any conflict between English and other language versions, the English version shall prevail.

### Full text of H- and EUH-phrases:

H373	May cause damage to organs through prolonged or repeated exposure.
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STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
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Safety Data Sheet (SDS), EU

Although reasonable care has been taken in the preparation of the information contained herein, Resco extends no warranties, makes no representation and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.