



# SAFETY DATA SHEET

## CALDE™ CAST LF 40

Version: 20  
MAL40031

The following Safety Data Sheet has been created according to the Regulation (EC) No 1272/2008 [CLP/GHS], the Regulation (EU) No 453/2010 and the Commission Regulation (EU) 2015/830 (28th of May 2015) on compilation of e-SDS.

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

### 1.1. Product identifier

CALDE™ CAST LF 40

#### 1.1.1. Dates and Modifier of the Safety Data Sheet

<b>Creation Date</b>	17/09/2014 (DD/MM/YY)
<b>Modification Date:</b>	25/04/2016
<b>Modifier</b>	JP Targe
<b>Internal reference model</b>	Model:Simple_Al2O3

#### 1.1.2. SDS (Safety Data Sheet) status:

Revision

### 1.2. Relevant identifier uses of the substances or mixture and uses advised against:

#### 1.2.1. Relevant identified uses:

Usages of the product according to the ECHA (European CHemical Agency) - Guidance R.12 Use descriptor system - draft version 2.0  
SU10; 13+NACE C23.2+PC 10+PROC 1; 2; 3; 4; 5; 8a; 9; 13; 14; 19; 21; 22; 23; 24; 26+ERC 2; 3; 5+AC 12-1; 12-2  
Unshaped refractory material  
Restricted to industrial or professional users for application as safety or wear linings and maintenance of both in all industrial devices at temperatures > 1000°C.

#### 1.2.2. Uses advised against:

Non relevant.

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

#### 1.3.1. Supplier:

CALDERYS REACH Service

#### 1.3.2. Street adress:

4, allée de Lausanne – Bât. F

#### 1.3.3. Country ID/Post code/Place:

F-38070 Saint Quentin Fallavier - France

#### 1.3.4. Telephone number (and telefax):

Phone: +33 (0)4 74 99 99 40 - Fax: +33 (0)4 74 99 99 66

#### 1.3.5. E-mail:

If another updated SDS is needed, please contact your local CALDERYS commercial desk.

#### 1.3.6. National contact's name:

J-P.Targe - Tel +33 (0)4.74.99.99.40 - Fax 33 (0)4.74.99.99.66 : CALDERYS France - Research Centre - 4 allée de Lausanne - F-38070 Saint Quentin Fallavier  
jean-pierre.targe@calderys.com

### 1.4. Emergency telephone number:

UK: The UK National Poisons Emergency number is 0870 600 6266 - (Outside the UK: +44 870 600 6266)

See enclosed annex for other Emergency telephone

### 1.5. Opening hours:

Non relevant.

## SECTION 2: Hazards identification

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

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

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 [CLP/GHS] on classification, labeling and packaging of substances and mixtures.

#### 2.1.2. Classification according to Directive 1999/45/EC [DPD]

This regulation should not be used anymore.

#### 2.1.3. Additional information:

For full text of H, EUH-phrases: see section 16.

### 2.2. Label elements:

#### 2.2.1. Labelling according to directive 1999 45 EC [DPD]:

This regulation should not be used anymore.

##### 2.2.1.1. Classification according to the GHS/CLP regulation:

Non relevant.

##### 2.2.1.2. Signal word:

Non relevant.

#### 2.2.2. Symbol(s) in black/white or colour according to directive 1999/45/CE [DPD]:

This regulation should not be used anymore.

##### 2.2.2.1. Symbol(s) in black/white or colour according to the Regulation (EC) No 1272/2008 [CLP/GHS]:

Non relevant.

#### 2.2.3. Indication(s) of danger (1999/45/CE):

This regulation should not be used anymore.

#### 2.2.4. Risk phrase(s) R ( For full text of R phrases: see section 16 )

This regulation should not be used anymore.

#### 2.2.5. Safety phrase(s) S ; ( For full text of S phrases: see section 16 )

This regulation should not be used anymore.

#### 2.2.6. Applicable label elements in accordance with sections A and B of annex V to the DPD (special provisions for certain mixtures):

Non relevant.

#### 2.2.7. Authorization number(s) from ECHA:

Non relevant.

#### 2.2.8. Labelling according to the Regulation (EC) No 1272/2008 [CLP/GHS]:

Non relevant.

#### 2.2.9. GHS/CLP Precautionary statement phrases (P)

Non relevant.

### 2.3. Other hazards:

No.

#### 2.3.1. SVHC (Substance of Very High Concern):

No.

#### 2.3.2. CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

No.

#### 2.3.3. PBT : Persistent, Bioaccumulative and Toxic

No.

#### 2.3.4. vPvB: very Persistent very Bioaccumulative

No.

#### 2.3.5. POP: Persistent Organic Pollutant

No.

#### 2.3.6. Formation of air contaminants during hardening or processing:

No.

## SECTION 3: Composition / Information on ingredients

### 3.2. Mixture:

#### 3.2.1. Non hazardous components

Component	CAS N° / EC N°	Weight %
Chamotte - Nr. REACH. 01-2119527779-22-	CAS : 92704-473-8	>=50 <100

xxx	Einecs :	296-473-8	
Andalusite - REACH: Substance exempted in accordance with Annex V.7	CAS :	12183-80-1	>=10 <25
	Einecs :	235-352-6	
Alumina cement - REACH: Substance exempted in accordance with Annex V.7	CAS :	65997-16-2	>=2.5 <10
	Einecs :	266-045-5	
Kaolinite - REACH: Substance exempted in accordance with Annex V.7	CAS :	1318-74-7	>=2.5 <10
	Einecs :	215-286-4	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### 4.1.1. Eyes:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

#### 4.1.2. Skin:

Wash with soap and water, if irritation persists seek medical advice.  
If skin irritation or rash occurs: Get medical advice/attention.

#### 4.1.3. Ingestion:

If swallowed, rinse mouth with water (only if the person is conscious).  
If swallowed, drink copious amount of water (at least 0,5 liter), provided fresh air and seek medical advice immediately.

#### 4.1.4. Inhalation:

If there is a sensation of nausea or dizziness, remove to fresh air and seek medical attention.  
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Dust may cause temporary irritation of upper respiratory tract and slight irritation of eyes and nose

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

Non relevant.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

#### 5.1.1. Suitable fire-fighting methods :

In case of fire use water based extinguishers or hosepipe.

#### 5.1.2. Unsuitable extinguishing media:

Non relevant.

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

In standard storage conditions, non-combustible, non-explosive and non-flammable.

#### 5.2.1. Hazardous decomposition products

None

### 5.3. Advice for firefighters

#### 5.3.1. Personal precautions:

Personal precautions : see Section 8.  
Fire fighter clothing according to European standard EN469.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

##### 6.1.1.1. Protective equipment:

Personal precautions : see Section 8.



# SAFETY DATA SHEET

## CALDE™ CAST LF 40

Version: 20  
MAL40031

### 6.1.1.2. Emergency procedures

Non relevant.

### 6.1.2. For emergency responders

Non relevant.

### 6.2. Environmental precautions

Non relevant.

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

#### 6.3.1. Appropriate containment techniques may include any of the following:

##### 6.3.1. - (a) bunding, covering of drains;

Non relevant.

##### 6.3.1. - (b) capping procedures.

Non relevant.

#### 6.3.2. Appropriate advices on how to clean-up a spill. Appropriate clean-up procedures may include any of the following:

##### 6.3.2. - (a) neutralisation techniques;

Non relevant.

##### 6.3.2. - (b) decontamination techniques;

Non relevant.

##### 6.3.2. - (c) adsorbent materials;

Non relevant.

##### 6.3.2. - (d) cleaning techniques;

No special precautions for cleaning or removal.

##### 6.3.2. - (e) vacuuming techniques;

Non relevant.

##### 6.3.2. - (f) equipment required for containment/clean-up (include the use of non-sparking tools and equipment where applicable).

Non relevant.

#### 6.3.3. Other information relating to spills and releases:

##### 6.3.3.1. Non allowed techniques:

Non relevant.

### 6.4. Reference to other sections

#### 6.4.1. References:

Personal precautions : see Section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling:

#### 7.1.1. Protective measures:

##### 7.1.1.- (a) Measures to prevent fire:

Non relevant.

##### 7.1.1.- (b) Measures to prevent aerosol and dust generation:

Avoid bulk handling susceptible to create dust.

##### 7.1.1.- (c) Measures to protect environment:

Non relevant.

#### 7.1.2. Advice on general occupational hygiene:

When using do not eat, drink or smoke.

### 7.2. Conditions for safe storage, including any incompatibilities:

#### 7.2.1. Technical measures and storage conditions:

Engineering measures, such as local dust extraction, to ensure compliance with Occupational Exposure Limits.

Avoid dust formation.

Avoid bulk handling susceptible to create dust.

Stacking height: up to 2 pallets maximum.

Clean area frequently to avoid buildup of dust

#### 7.2.2. Recommended packing:

Multi-ply paper sacks or big-bags.

Plastic shrink or cling film.

Wooden pallet with shrink film.

### 7.2.3. Requirements for storage rooms and vessels:

Store in dry conditions

Avoid contact with incompatibles mentioned under item 10

### 7.2.4. Storage class (national):

Non relevant.

### 7.2.5. Further information on storage conditions:

Non relevant.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Substance	CAS N° / EC N°	L.T.E - 8 hr TWA mg/m <sup>3</sup>
Chamotte - Nr. REACH. 01-2119527779-22-xxx	CAS : 92704-473-8 Einecs : 296-473-8	No data
Andalusite - REACH: Substance exempted in accordance with Annex V.7	CAS : 12183-80-1 Einecs : 235-352-6	No data
Alumina cement - REACH: Substance exempted in accordance with Annex V.7	CAS : 65997-16-2 Einecs : 266-045-5	5
Kaolinite - REACH: Substance exempted in accordance with Annex V.7	CAS : 1318-74-7 Einecs : 215-286-4	No data

### 8.2. Exposure Controls:

The chart above mentions the lowest exposure limit values known in the EU for each substance.

All the values indicated in the chart above are available in the GESTIS database:

[http://limitvalue.ifa.dguv.de/Webform\\_gw.aspx](http://limitvalue.ifa.dguv.de/Webform_gw.aspx)

[http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/scoel.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/scoel.pdf)

Read also:

Austria: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/at.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/at.pdf):

Belgium: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/be.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/be.pdf):

France: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/fr.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/fr.pdf):

Germany: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/ags.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/ags.pdf):

Hungary: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/hu.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/hu.pdf):

Poland: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/pl.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/pl.pdf):

Spain: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/es.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/es.pdf):

The Netherlands: <http://www.ser.nl/nl/taken/adviserende/grenswaarden.aspx>:

United Kingdom: [http://www.dguv.de/medien/ifa/en/gestis/limit\\_values/pdf/uk.pdf](http://www.dguv.de/medien/ifa/en/gestis/limit_values/pdf/uk.pdf):

Some values, not indicated in the GESTIS database, are coming from list placed in the 3 European directives dedicated to indicative occupational exposure limit values. Please find below their references.

1st list: DIRECTIVE 2000/39/EC / 2nd list: DIRECTIVE 2006/15/EC / 3rd list: DIRECTIVE 2009/161/EU

Approved Occupational Exposure values indicated for total inhalable and/or respirable dust according to GESTIS.

Customers are advised to check the limit values indicated, that could have been up-dated (in GESTIS) since the creation of this SDS.

Contains some substances without any approved Occupational Exposure values

#### 8.2.0. DNEL (Derived no effect level)

Non relevant.

#### 8.2.1. Appropriate engineering controls

Provide appropriate exhaust ventilation and filtering at the places where dust can be generated.

#### 8.2.2. Individual protection measures, such as personal protective equipment

##### 8.2.2.1. Good occupational hygiene practices

For details about the following HS personal devices, please see the annex dedicated to. (Section .17)

##### 8.2.2.2. Personal protective equipment according to the 89/686/EEC

##### 8.2.2.2. (a) Eye/face protection

Wear safety glasses with lateral protection (166 rev. S4KN2)



### 8.2.2.2. (b) Skin protection

Standard industrial clothing is suitable for installations at ambient temperatures (ISO 6942)  
Do not shake the working clothes. Do not remove dust with compressed air.



### 8.2.2.2. (c) Hands:

Wear leather security gloves (EN 388-2003).



### 8.2.2.2. (d) Respiratory protection

Maintain adequate ventilation whenever dust is present.  
Consult the local reglementation.  
Wear appropriate anti-dust mask (EN149:2009 FFP3)  
Use a filtering respiratory device, in case of airborne concentrations are expected to exceed exposure limits.



### 8.2.3. Environmental exposure controls

Non relevant.

## SECTION 9: Physical and chemical properties

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

<b>Appearance:</b>	Dry mixture of aggregates and fine powders
<b>Color:</b>	Grey
<b>Odour:</b>	No particular odour
<b>Melting point</b>	> 1450 °C
<b>Packing Density (g/cm<sup>3</sup>) :</b>	1.69
<b>Vapour density:</b>	Non relevant.
<b>pH:</b>	7 < pH < 10, after water has been added.
<b>Segregation:</b>	Non relevant.
<b>Boiling point:</b>	Non relevant.
<b>Flash point:</b>	Non relevant.
<b>Inflammability:</b>	No.
<b>Explosive properties:</b>	No.
<b>Combustive properties:</b>	No.
<b>Solubility solvent:</b>	No.



# SAFETY DATA SHEET

## CALDE™ CAST LF 40

Version: 20  
MAL40031

**Partition coefficient  
n-octanol/water:** Non relevant.  
**Viscosity:** Non relevant.  
**Hydrosolubility:** Lower than 2,5%

### 9.2. Other informations:

All non relevant data are linked to the nature of our products - mineral mixtures.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Yes, during first heating of the product

### 10.2. Chemical stability

Chemically stable refractory product

### 10.3. Possibility of hazardous reactions

No hazards to our knowledge

### 10.4. Conditions to avoid

No hazards to our knowledge

### 10.5. Incompatible materials

No hazards to our knowledge

### 10.6. Hazardous decomposition products

None

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects.

#### 11.1.1. Substances.

Non relevant.

##### 11.1.1.1. The relevant hazard classes for which information shall be provided, are:

Non relevant.

#### 11.1.2. Mixtures.

Non relevant.

##### 11.1.2.1. The relevant effects classes for which information shall be provided, are:

###### 11.1.2.1. - (a) acute toxicity:

Non relevant.

###### 11.1.2.1. - (b) skin corrosion/irritation:

Non relevant.

###### 11.1.2.1. - (c) serious eye damage/irritation:

Non relevant.

###### 11.1.2.1. - (d) respiratory or skin sensitisation:

Non relevant.

###### 11.1.2.1. - (e) germ cell mutagenicity:

Non relevant.

###### 11.1.2.1. - (f) carcinogenicity:

Non relevant.

###### 11.1.2.1. - (g) reproductive toxicity:

Non relevant.

###### 11.1.2.1. - (h) STOT-single exposure:

Non relevant.

###### 11.1.2.1. - (i) STOT - repeated exposure:

Non relevant.

###### 11.1.2.1. - (j) aspiration hazard:

Non relevant.

##### 11.1.2.2. C.M.R. - Classification of the mixture for the following health effects according to the Directive 1999/45/EC

Non relevant.

##### 11.1.2.2.1. C.M.R. - Classification of the mixture for the following health effects according to the Directive 1272/2008 [CLP/GHS]:

Non relevant.

##### 11.1.2.3. Other health effects of the mixture.

This product does not meet the criteria for classification in any hazard class according to Directive



# SAFETY DATA SHEET

## CALDE™ CAST LF 40

Version: 20  
MAL40031

1999/45/EC [DPD]

### 11.1.3. The substance or mixture is not classified for a particular hazard class.

This product does not meet the criteria for classification in any hazard class according to Directive 1999/45/EC [DPD]

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 [CLP/GHS].

## SECTION 12: Ecological information

### 12.1. Toxicity

The following points are theoretical conclusions:

#### 12.1.1. Air:

Non relevant.

#### 12.1.2. Water:

Unknown at that date.

#### 12.1.2.0 Toxicity linked to fishes, Daphnia, Other aquatic invertebrates, Bacteria, Algae:

Non relevant.

#### 12.1.2.1 Substance:

Non relevant.

#### 12.1.2.2 PNEC : Predicted No-Effect Concentration

Non relevant.

#### 12.1.2.3. Substance:

Non relevant.

#### 12.1.3. Soil :

Non relevant.

#### 12.1.4. Flora:

Unknown at that date.

#### 12.1.5. Fauna:

Non relevant.

#### 12.1.6. Bee:

Non relevant.

### 12.2. Persistence and degradability

No.

### 12.3. Bioaccumulative potential

No.

### 12.4. Mobility in soil

No.

### 12.5. Results of PBT and vPvB assessment

No.

### 12.6. Other adverse effects

Unknown at that date.

#### 12.6.1. Miscellaneous:

The unused product is not considered dangerous for the environment

## SECTION 13: Disposal considerations

### 13.0. DIRECTIVE 2008/98/EC ON INDUSTRIAL WASTE.

#### 13.1. WASTE TREATMENT METHODS

As this product is a mixture of minerals, all kind of methods are relevant.

The unused product is not considered dangerous for the environment

Unused material can be disposed according to local regulations and statutory EU provisions

#### 13.1.1. DISPOSAL OPERATIONS

Unknown at that date.

D 1 Deposit into or on to land (e.g. landfill, etc.)

D 3 Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.)

D 9 Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)

#### 13.1.2. RECOVERY OPERATIONS

R 5 Recycling/reclamation of other inorganic materials.

#### 13.1.3. PROPERTIES OF WASTE WHICH RENDER IT HAZARDOUS

Non relevant.

### 13.2. POTENTIAL DANGER FROM THE WASTE:

Unknown at that date.

Before destruction and disposal of the refractory lining, customers are advised to evaluate any changes to the product that may be induced by the introduction of substances, or operating conditions outside the control of the Vendor

### 13.3. EUROPEAN LIST OF HAZARDOUS WASTES (2000/532/EC)

As this product can be used in multiple industries, all categories are potentially valid.

- 10 02 : Wastes from the iron and steel industry
- 10 02 06 : Spent linings and refractories
- 10 03 : Wastes from aluminium thermal metallurgy
- 10 03 99 : Wastes not otherwise specified
- 10 04 : Wastes from lead thermal metallurgy
- 10 04 08 : Spent linings and refractories
- 10 05 : Wastes from zinc thermal metallurgy
- 10 05 07 : Spent linings and refractories
- 10 06 : Wastes from copper thermal metallurgy
- 10 06 08 : Spent linings and refractories
- 10 07 : Wastes from silver, gold and platinum thermal metallurgy
- 10 07 06 : Spent linings and refractories
- 10 08 : Wastes from other non-ferrous thermal metallurgy
- 10 08 07 : Spent linings and refractories
- 10 09 : Wastes from casting of ferrous pieces
- 10 09 99 : Wastes not otherwise specified
- 10 10 : Wastes from casting of non-ferrous pieces
- 10 10 99 : Wastes not otherwise specified
- 10 11 : Wastes from manufacture of glass and glass products
- 10 11 08 : Spent linings and refractories
- 10 12 : Wastes from manufacture of ceramic goods, bricks, tiles and construction products
- 10 12 07 : Spent linings and refractories
- 10 13 : Wastes from manufacture of cement, lime and plaster and articles and products made from them
- 10 13 08 : Spent linings and refractories

## SECTION 14: Transport information

### ADR/RID/ADN class:

Non relevant to the UN classification on dangerous goods.

### ICAO-TI / IATA-DGR class:

Non relevant to the UN classification on dangerous goods.

### IMDG (marine) class:

Non relevant to the IMDG classification on dangerous goods.

### 14.1. UN number

Non relevant.

### 14.2. UN proper shipping name

Non relevant.

### 14.3. Transport hazard class(es)

Non relevant to the UN classification on dangerous goods.

### 14.4. Packing group:

Non relevant.

### 14.5. Environmental hazards:

Non relevant.

### 14.6. Special precautions for user:

Mixture of inert minerals.

## SECTION 15: Regulatory information

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

This product does not meet the criteria for classification for none of European or local directives, nor regulations, already known and used within the EU.

#### 15.1.1. Directive 67/548/EEC on dangerous substances.

This product does not meet the criteria for classification in that directive.

#### 15.1.2. Directive 1999/45/EC on dangerous preparation.

This product does not meet the criteria for classification in that directive.

#### 15.1.3. Regulation 1907/2006/EC on REACH regulation.

This product does not meet the criteria for classification in that regulation.

**15.1.4. Regulation 1272/2008/EC on the GHS/CLP, including the EC 605/2014 (6th ATP)**

This product does not meet the criteria for classification in that regulation.

**15.1.5. Regulation 453/2010/EC amending Regulation (EC) No 1907/2006**

This SDS has been created according to this regulation.

**15.1.6. Directive 2006/8/EC on CMR and hazardous substances for environment.**

This product does not meet the criteria for classification in that directive.

**15.1.7. Directive 94/9/EC on equipment and protective systems intended for use in potentially explosive atmospheres (ATEX 95)**

This product does not meet the criteria for classification in that directive.

**15.1.8. Directive 1999/92/EC on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres (ATEX 137)**

This product does not meet the criteria for classification in that directive.

**15.1.9. Decision No 2455/2001/EC on the list of priority substances in the field of water policy.**

This product does not meet the criteria for classification in that directive.

**15.1.10. MONTREAL Protocol on Substances That Deplete the Ozone Layer (7th revision)**

This product does not meet the criteria for classification in that protocol: Mixture of inert minerals.

**15.1.11. IBC: Institutional Biosafety Committee**

This product does not meet the criteria for any biosafety classification.

**15.1.12. MARPOL 73/78 (the International Convention for the Prevention of Pollution from Ships)**

This product does not meet the criteria for classification in that directive.

**15.1.13. STOCKHOLM convention on persistent organic pollutants (POPs)**

This product does not meet the criteria for classification in that directive.

**15.1.14. ROTTERDAM Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.**

This product does not meet the criteria for classification in that directive.

**15.1.15. Directive 96/29 EURATOM :**

This product does not meet the criteria for classification in that directive.

**15.2. Chemical Safety Assessment**

This product doesn't require a Chemical Safety Assessment.

**15.3. Occupational illness**

Commission Recommendation of 19 September 2003 concerning the European schedule of occupational diseases (Text with EEA relevance) (notified under document number C(2003) 3297)

**15.3.1. Diseases caused by the following chemical agents:**

Non relevant.

**15.3.2. Diseases caused by the following chemical agents:**

**- - - .201. Skin diseases and skin cancers caused by:**

Non relevant.

**- - - .301. Diseases caused by the inhalation of substances and agents not included under other headings**

**- - - .301. Diseases of the respiratory system and cancers**

301.31 Pneumoconioses caused by dusts of silicates

**15.5. Other national relevant Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**15.5.- (a) TA Air/TA Luft (German Technical Instructions on Air Quality Control)**

This product does not meet the criteria for classification in that directive.

**15.5.- (b) WgK: German Water hazard class (from the Administrative Regulation on substances hazardous to water - assessment):**

The product, (according to German regulation) is classified as (in the sense of 17.05.1999):  
WGK 1: slightly hazardous to water (self-classification)

## SECTION 16: Other information

**16.0. Additionnal safety information:**

Non relevant.

**16.1. GHS/CLP Pictograms**

**16.1.1. Symbol(s) in black/white or colour according to the Regulation (EC) No 1272/2008 [CLP/GHS]:**

Non relevant.

**16.1.2. Labelling according to the Regulation (EC) No 1272/2008 [CLP/GHS]:**

Non relevant.



# SAFETY DATA SHEET

## CALDE™ CAST LF 40

Version: 20  
MAL40031

### 16.1.3. Classification according to the GHS/CLP regulation:

Non relevant.

### 16.1.4. Signal word:

Non relevant.

### 16.1.5. GHS/CLP Hazard statement phrases (H - EUH):

Non relevant.

### 16.7. Training:

Non relevant.

### 16.8. Other informations :

This safety data sheet (SDS) has been compiled according to Directive 453/2010/CE

This safety data sheet (SDS) has been compiled according to Directive 1999-45-CE

This safety data sheet (SDS) has been compiled according to annexe II of the CE 1907/2007 (18th of december 2006) regulations concerning the adoption of REACH

The limits shown are from annex I of the European Directive 67/548 EEC modified on 17th of March 2007.

The limits shown are from annex VI of the GHS as of 07/10/2012

### SDS status :

#### Modifier

JP Targe

Modification Date : 25/04/2016

### Modification:

New

As the Directive 1999/45 / EC [DPD] is obsolete now, this Safety Data Sheet does not contain anymore information related to the old system. All data information are now related only to Regulation (EC) No. 1272/2008 [CLP / GHS], Regulation (EU) No 453/2010 and to the Commission Regulation (EU) 2015/830 (28th of May 2015) on compilation of e-SDS. Therefore, all sections and sub-sections have been modified.

### Acronyms and abbreviations used:

AAA = DNEL Long Term exposure - Chronic effect - Local

ADR: European regulation on transport of dangerous goods by road.

AOEL: Acceptable Operator Exposure Level

AOX: Adsorbable Organic Halogen

BBB = DNEL Long Term exposure - Acute effect - Local

BCF: Bioconcentration factor

BOD: Biochemical Oxygen Demand (BOD)

CAS: Chemical Abstracts Service

CCC = DNEL Short Term exposure - Chronic effect - Local

CLP : Classification, Labelling and Packaging of chemicals

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

COD: Chemical Oxygen Demand.

CSA : Chemical Safety Assessment

CSR : Chemical Safety Report

DDD = DNEL Short Term exposure - Acute effect - Local

DNEL : Derived No-Effect Level

EC: Ecotoxicity

EC50: Half maximal effective concentration

ECHA : European Chemical Agency

EINECS: European Inventory of Existing Commercial Chemical Substance.

ES : Exposure Scenario

eSDS : extended Safety Data Sheet

GefStoffV: German regulation on hazardous substances.

GHS : Global Harmonized System of classification and labelling of chemicals

GHS/CLP: Globally Harmonized System of Classification, Labelling and Packaging of chemicals

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the International Air Transport Association

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instruction by the International Air Transport Association

IMDG: International Maritime code for Dangerous Goods.

JAP-ISHA-C.O.Nr. = Japanese Industrial Safety and Health Act - Cabinet Order Nr.

JAP-PDSA-C.O.Nr. = Japanese Poisonous and Deleterious Substances Control Act - Cabinet Order Nr.

JAP-PRTR-C.O.Nr. = Japanese Pollutant Release and Transfer Register - Cabinet Order Nr.

LC50: Lethal Concentration, 50%.

LD50: Lethal Dose, 50%.

LOAEL: Lowest observed adverse effect level

MFSU: Manufacture, Formulation, Supply and Use

NEC: No effect concentration  
NOEC: No Observed Effect Concentration  
N.O.S. : Not Otherwise Specified  
NLP : No-Longer Polymers  
OECD: Organisation for Economic Co-operation and Development  
PAH: Polycyclic Aromatic Hydrocarbon.  
PBT : Persistent, Bioaccumulative and Toxic  
PEC : Predicted Environmental Concentration  
PNEC : Predicted No-Effect Concentration  
PNEC Co = PNEC Coral  
PNEC FW = PNEC Freshwater  
PNEC Sd = PNEC Sediment  
PNEC So = PNEC Soil  
PNEC SW = PNEC Seawater  
PNEC WIR = PNEC Water intermittent release  
POP: Persistent Organic Pollutant  
CSFF: Crystalline Silica Fine Fraction (according to the standard EN 481)  
REACH : Registration, Evaluation, Authorisation and Restriction of CHemical substances  
RID: International regulation on transport of dangerous goods by railway.  
RIP : REACH Implementation Project  
RMM : Risk Management Measure  
ROEX = Route of Exposure  
SVHC : Substance of Very High Concern  
TDOAI EC50 = Toxicity to daphnia and other aquatic invertebrates (EC50)  
TDOAI NOEC = Toxicity to daphnia and other aquatic invertebrates NOEC  
TGD : Technical Guidance Document  
ThOD: Theoretical Oxygen Demand  
TOF LC50 = Toxicity on fish LC50  
TOF NOEC = Toxicity on fish NOEC  
TTA EC10 = Toxicity to algae EC10  
TTA EC50 = Toxicity to algae EC50  
TTA NOEC = Toxicity to algae NOEC  
TTB EC0 = Toxicity to Bacteria (EC0)  
TTB NOEC = Toxicity to Bacteria NOEC  
UVCB : Substances of Unknown Variable composition, complex reaction products or Biological materials  
vPvB: very Persistent very Bioaccumulative

## 17. Annexes:

Attached annex : Medical toxicology units  
Attached annex: HS Devices - Personal protection



**SAFETY DATA SHEET**  
**CALDE™ CAST LF 40**

Version: 20  
MAL40031

# SAFETY DATA SHEET

## CALDE™ CAST LF 40

Version: 20  
MAL40031

ROUTE OF EXPOSURE			
EYES	SKIN	HANDS	INHALATION
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	FFP3
DEDICATED USAGE: Non labelled, cast, hydraulic bonded products, cold conditions.			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	ISO6942	407 - 2122	FFP3
DEDICATED USAGE: Non labelled, cast, hydraulic bonded products, hot conditions.			
Face shield	Clothes	Gloves	Mask
166 rev, <b>F4KN2</b>	340 rev	388 - 3111	FFP3
DEDICATED USAGE: Non labelled, gunned, hydraulic bonded products, cold conditions.			
Face shield	Clothes	Gloves	Mask
166 rev, <b>F4KN2</b>	ISO6942	407 - 2122	FFP3
DEDICATED USAGE: Non labelled, gunned, hydraulic bonded products, hot conditions.			
Face shield	Clothes	Gloves	Mask
166 rev, <b>F4KN2</b>	340 rev	388 - 3111	FFP3
DEDICATED USAGE: Non labelled chemical bonded gunning mixes, cold installation			
Face shield	Clothes	Gloves	Mask
166 rev, <b>F4KN2</b>	ISO6942	407 - 2122	FFP3
DEDICATED USAGE: Non labelled chemical bonded gunning mixes, hot installation			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	FFP3
DEDICATED USAGE: Labelled hydraulic bonded products, cold installation			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	ISO6942	407 - 2122	EN 141:2000
DEDICATED USAGE: Labelled hydraulic bonded products, hot installation			
Face shield	Clothes	Gloves	Mask
166 rev, <b>F4KN2</b>	ISO6529-463	3121 - 1994	Local rules
DEDICATED USAGE: Phosphate bonded products			
Face shield	Clothes	Gloves	Mask
166 rev, <b>F4KN2</b>	ISO17491-3	3121 - 1994	Local rules
DEDICATED USAGE: Sodium silicate bonded products			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	EN 141:2000
DEDICATED USAGE: Labelled dry mixes			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	FFP3
DEDICATED USAGE: Non labelled dry mixes			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	Local rules
DEDICATED USAGE: Non labelled plastics or ramming mixes			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	FFP3
DEDICATED USAGE: Resin bonded products, cold installation.			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	ISO6942	407 - 2122	EN 141:2000
DEDICATED USAGE: Resin bonded products, hot installation			
Glasses with lateral protection	Clothes	Gloves	Mask
166 rev, <b>S4KN2</b>	340 rev	388 - 3111	Local rules
DEDICATED USAGE: Non labelled cement, patched, sprayed or trowelled products			