

**Opti Cal Liquid**

**Section 1: Identification of the substance/preparation and of the company/undertaking**

**1.1 Product identifier**

Product Name: **Opti Cal Liquid**  
Supplier: Engage Agro Europe Ltd  
Chorley Business & Technology Centre  
Euxton Lane,  
Euxton, Chorley  
Lancashire PR7 6TE  
England  
Telephone: +44 (0) 1257 226590

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

Product use: Fertiliser. For professional use only.  
Uses advised against: All uses not specified in this section or in section 7.3.

**1.3 Emergency telephone**

Emergency Telephone	Type of Assistance	Opening Hours
0845 4647	England and Wales: NHS Direct – Health advice and assistance	24 Hours
08454 242424	Scotland: NHS24	24 Hours

**Section 2: Hazards identification**

**2.1 Classification of the Substance and Mixture**

CLP Regulation (EC) n°1272/2008: Classification of this product has been carried out in accordance with CLP Regulation (EC) N° 1272/2008.  
Eye Dam. 1: H318

**2.2 Label elements**

Hazard Statements: Eye Dam. 1: Causes serious eye damage

Hazard Pictograms:



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**Signal Words:** Danger  
**Precautionary Statement:** P280 - Wear Protective gloves/protective clothing/eye protection/face protection  
**Precautionary Statement Response:** P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
 P310 - Immediately call a poison centre/doctor  
**Precautionary Statement Storage:**  
**Precautionary Statement Disposal:**

**2.3 Other Hazards**

**Other Hazards** Product fails to meet PBT/vPvB criteria

**Section 3: Composition/information on ingredients**

**3.1 Mixtures**

**In accordance with Annex II of Regulation (EC) n°1907/2006**

Identification	Chemical name/Classification	Concentration
CAS: 8061-52-7	<b>Lignosulfonic acid, calcium salt</b>	10-<20%
EC: Not applicable	Regulation 1272/2008	
Index: Not applicable	Aquatic Chronic 4: H413	
REACH: Not applicable		
Identification	Chemical name/Classification	Concentration
CAS: 544-17-2	<b>Diammonium Phosphonate</b>	10-<20%
EC: 208-863-7	Regulation 1272/2008	
Index: Not applicable	Eye Dam. 1: H318	
REACH: Not applicable		

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**Section 4: First aid measures**

**4.1 Description of first aid measures**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention.

- By inhalation:** This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.
- By skin contact:** In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet.
- By eye contact:** Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of this product.
- By Ingestion:** In case of consumption, seek immediate medical assistance showing the SDS of this product.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in Sections 2 and 11.

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

Not applicable

**Section 5: Fire-fighting measures**

**5.1 Extinguishing media**

- Extinguishing media:** Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper use polyvalent powder extinguishers (ABC powder) in accordance with the regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture**

- Exposure hazards:** As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters**

- Advice for fire-fighters:** Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit) in accordance with Directive 89/654/EC.
- Additional provision:** Act in accordance with the internal emergency plan and information sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into aqueous medium.

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**Section 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Isolate leaks provided that there is no additional risk for the people performing this task. Personal protective equipment must be used against potential contact with the spilt product (See Section 8). Evacuate the area and keep out those who do not have protection.

**6.2 Environmental precautions**

**Environmental precautions:** Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

**6.3 Methods and material for containment and cleaning up**

**Clean-up procedures:** It is recommended: Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Any concern related to disposal consult Section 13.

**6.4 Reference to other sections**

**Reference to other sections:** For disposal see Section 13. For personal protective equipment see Section 8.

**Section 7: Handling and storage**

**7.1 Precautions for safe handling**

**A - Precautions for safe manipulation:** Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (See section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

**B - Technical recommendations for the prevention of fires and explosions:** Products is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

**C - Technical recommendations to prevent ergonomically and toxicological risks:** Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

**D - Technical recommendations to prevent environmental risks:** It is recommended to have absorbent material available at close proximity to the product (see section 6 Methods and Material for Containment and Cleaning up).

**7.2 Conditions for safe storage, including any incompatibilities**

**General conditions for storage:** Avoid sources of heat, radiation, static electricity and contact with food. Store between 0 -25°C for a maximum of 24 months.

**7.3 Specific end use(s)**

**Specific end use(s):** Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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Section 8: Exposure controls/personal protection

8.1 Control Parameters

Substances whose occupational exposure limits have to be monitored in the work environment.

**DNEL (Workers):**

Identification		Short exposure	
		Systemic	local
Calcium diformate CAS: 544-17-2 CE: 208-863-7	Oral	Not applicable	Not applicable
	Dermal	4780 mg/kg	Not applicable
	Inhalation	337 mg/m <sup>3</sup>	Not applicable
		long exposure	
		Systemic	local
	Oral	Not applicable	Not applicable
	Dermal	4780 mg/kg	Not applicable
	Inhalation	377 mg/m <sup>3</sup>	Not applicable

**DNEL (General Population)**

Identification		Short exposure	
		Systemic	local
Calcium diformate CAS: 544-17-2 CE: 208-863-7	Oral	Not applicable	Not applicable
	Dermal	2390 mg/kg	Not applicable
	Inhalation	83.2 mg/m <sup>3</sup>	Not applicable
		Large exposure	
		Systemic	local
	Oral	23.9 mg.kg	Not applicable
	Dermal	2390 mg/kg	Not applicable
	Inhalation	83.2 mg/m <sup>3</sup>	Not applicable

**PNEC**

Identification				
Calcium diformate CAS: 544-1702 CE: 208-863-7	Fresh water	2 mg/L	STP	2.21 mg/L
	Marine water	0.2 mg/L	Soil	1.5 mg/kg
	Sediment (fresh water)	13.4 mg/kg	Intermittent	10 mg/L
	Sediment (marine water)	1.34 mg/kg	Oral	Not applicable

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**8.2 Exposure controls**




**A - General security and hygiene measures in the work place**

As a preventative measure it is recommended to use basic personal protective equipment, with the corresponding 'CE Marking in accordance with Directive 89/686/EC. For more information on personal protective equipment (storage, use, cleaning, maintenance, class of protection...) consult the information leaflets provided by the manufacturer. For more information see subsection 7.1

**B - Specific Respiratory Protection**


The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

**C - Specific protection for the hands**


Pictogram	PPE	Labelling	CEN Standard	Remarks
	Protective gloves against minor risks	CE, Cat I		Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend CE III in line with standards EN 420 and EN 374.

As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application.

**D - Ocular and facial protection**



Pictogram	PPE	Labelling	CEN Standard	Remarks
	Panoramic glasses against liquid splash	CE, Cat II	EN 166:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturers instructions. Us if there is a risk of splashing

**E - Bodily protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing	CE, Cat I		Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2001, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994
	Anti-slip work shoes	CE, Cat II	EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with regulations EN 20354 and EN 13832-1

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**F - Additional emergency measures**

Emergency measure	Standards
	ANSI Z358-1 ISO 3864-1:2002
	DIN 12 899 ISO 3864-1:2002

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. Prevent further leakage or spillage if safe to do so

**Volatile organic compounds**

With regards to Directive 2010/75/EU, this product has the following characteristics:

V.O.C (Supply): 0% weight  
 V.O.C. density at 20°C: 0 kg/m<sup>3</sup> (0g/L)  
 Average Carbon No.: Not applicable  
 Average molecular Weight: Not applicable

**Section 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Physical state at 20°C:	Liquid
Appearance:	Characteristic
Colour:	Brown
Odour:	Characteristic
Boiling point:	Not applicable*
Vapour pressure:	Not applicable*
Evaporation rate:	Not applicable*
Density at 20°C:	1166-1186 kg/m <sup>3</sup>
Relative density at 20°C:	1.166-1.186
Dynamic viscosity at 20°C:	Not applicable*
Kinematic viscosity at 20°C:	Not applicable*
Kinematic viscosity at 40°C:	Not applicable*
Concentration:	Not applicable*
pH:	4-5
Vapour density at 20°C:	Not applicable*
Partition coefficient:	Not applicable*
Solubility in water at 20°C:	Not applicable*
Solubility properties:	Highly soluble
Decomposition temperature:	Not applicable*
Melting/freezing point:	Not applicable*
Flash point:	Non-flammable (>60°C)
Autoignition temperature:	Not applicable*
Lower flammability limit:	Not applicable*
Upper flammability limit:	Not applicable*

**9.2 Other Information**

Surface tension at 20°C:	Not applicable*
Refraction index:	Not applicable*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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**Section 10: Stability and reactivity**

**10.1 Reactivity**

**Reactivity:** No hazardous reactions are expected because the product is stable under recommended transport and storage conditions. See Section 7.

**10.2 Chemical stability**

**Chemical stability:** Stable under normal conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions**

**Hazardous reactions:** Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid**

**Conditions to avoid:** None known

**10.5 Incompatible materials**

**Incompatible materials:** Alkalis, strong bases and strong acids

**10.6 Hazardous decomposition products**

**Haz. Decomposition Products:** See subsection 10.3 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released. Carbon dioxide, carbon monoxide and other organic compounds.

**Section 11: Toxicological information**

**11.1 Information on toxicological effects**

The experimental information related to the toxicological properties of the product itself is not available.

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommend by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

**A - Ingestion:**

Acute toxicity: Based on available data, the classification criteria are not met as it does not contain substances classified as dangerous for consumption. For more information see Section 3.

Corrosive/irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

**B- Inhalation:**

Acute Toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see Section 3.

Corrosive/irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

**C- Contact with the skin and eyes:**

Contact with skin: Based on available data, the classification criteria are not met, as it does not contain substances dangerous for skin contact. For more information see Section 3.

Contact with eyes: Produces serious eye damage after contact.



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**D - CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see Section 3.

Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see Section 3.

Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see Section 3.

**E - Sensitising effects:**

Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

**F - Specific target organ toxicity (STOT)-time exposure:**

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for this effect. For more information see Section 3.

**G - Specific target organ toxicity (STOT)-repeated exposure:**

Specific target organ toxicity (STOT) repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

**H - Aspiration hazard:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see Section 3.

**11.2 Specific toxicology information on the substances**

**Acute Toxicity Data:**

Component	LD <sub>50</sub> Oral (mg/kg)	LD <sub>50</sub> Dermal (mg/kg)	LD <sub>50</sub> Inhalation (mg/L, 4 hrs.)
lignosulfonic acid, calcium salt	>2000	>2000	>5 mg/L (4h)
Calcium diformate	>2000	>2000	>5 mg/L (4h)

**Acute Toxicity Estimate (ATE mix):**

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (calculation method)	Not applicable
Dermal	>2000 mg/kg (calculation method)	Not applicable
Inhalation	>20 mg/L (4h) (calculation method)	Not applicable

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**Section 12: Ecological information**

**12.1 Toxicity**

Identification	Acute toxicity		Species	Genus
Calcium diformate	LC50	Not applicable		
	EC50	250 mg/L (48h)	Daphnia magna	Crustacean
	EC50	Not applicable		

**12.2 Persistence and degradability**

Identification	Degradability		Biodegradability	
Lignosulfonic acid, calcium salt	BOD5	Not applicable	Concentration	Not applicable
	COD	Not applicable	Period	Not applicable
	BOD5/COD	Not applicable	% biodegradable	32%

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

Product fails to meet PBT/vPvB criteria

**12.6 Other adverse effects**

Not described

**Section 13: Disposal considerations**

**13.1 Waste treatment methods**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
06 10 02	Waste containing hazardous substances	Dangerous

**Type of Waste (Regulation (EU) No 1357/2014):**

HP4 Irritant - skin irritation and eye damage

**Waste Management (disposal and evaluation):**

Consult the authorised waste service manager on the assessment and disposal operations in accordance with Annex I and Annex II (Directive 2008/98/EC). Under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed in the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

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**Section 14: Transport information**

**14.1 UN Number**

This product is not classified as dangerous for carriage.

**14.2 UN proper shipping name**

The product is not classified as dangerous for carriage.

**14.3 Transport hazard class(es)**

This product is not classified as dangerous for carriage.

**14.4 Packaging group**

The products is not classified as dangerous for carriage.

**14.5 Environmental hazards**

The product is not classified as dangerous for carriage.

**14.6 Special precautions for user**

The product is not classified as dangerous for carriage.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**

The product is not classified as dangerous for carriage.

**Section 15: Regulatory information**

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

**Specific regulations:**

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC with amendments.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending regulation (EC)No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

REGULATION (EC) No 1727/2008 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) of 16 December 2008 on classification, labelling and packaging of substances and mixture, amending and repealing Directives 6/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; with amendments

Regulation (EU) No 946/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on Persistent organic Pollutants and amending Directive 79/117/EC

European Agreement Concerning the Carriage of Dangerous Goods by Road (ADR), 2015

**15.2 Chemical Safety Assessment**

**Chemical safety assessment:**

The supplier has not carried out an evaluation of chemical safety.

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**Section 16 Other information**

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with Annex II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

**Modifications related to the previous security card which concerns the ways of managing risks:**

Non-applicable

**Texts of the legislative phrases mentioned in section 2:**

H318 - Causes serious eye damage

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

**CLP Regulation (EC) n° 1272/2008:**

Aquatic Chronic 4. H413 - May cause long lasting harmful effects to aquatic life

Eye Dam. 1: H318 - Causes serious eye damage

**Legal disclaimer:**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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