



# SAFETY DATA SHEET

Calform Plus

## Section 1. Identification

**Product identifier** : Calform Plus  
**Product code** : 122000006353  
**Other means of identification** : 81483043; CALFORM PLUS 350ML (NZ)

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

**Identified uses** : feed supplement  
**Uses advised against** : None known.

**Company Name** : Elanco New Zealand  
106 Wiri Station Road, Manukau, Auckland 2140  
**Telephone number** : +64 0800 352 626  
**Emergency telephone number** : CHEMTREC 0800 293702 (Freephone)  
CHEMTREC +64 9 801 0034 (Local)  
**Email** : elanco\_sds@elancoah.com  
**Transportation Emergency telephone number** : CHEMTREC 0800 293702 (Freephone)  
CHEMTREC +64 9 801 0034 (Local)

## Section 2. Hazards identification

**HSNO Approval Number** : HSR002521  
**HSNO Group Standard** : Animal Nutritional and Animal Care Products  
**HSNO Classification** : ACUTE TOXICITY (oral) - Category 4  
EYE IRRITATION - Category 2

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

This material is not classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

### GHS label elements

**Signal word** : Warning  
**Hazard statements** : H302 - Harmful if swallowed.  
H319 - Causes serious eye irritation.  
**Precautionary statements**  
**Prevention** : P280 - Wear eye or face protection.  
P270 - Do not eat, drink or smoke when using this product.  
P264 - Wash thoroughly after handling.  
**Response** : P301 + P312, P330 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 - If eye irritation persists: Get medical advice or attention.  
**Storage** : Not applicable.  
**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  
**Symbol** :



## Section 2. Hazards identification

**Other hazards which do not result in classification** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
Calcium formate	≥30 - ≤60	544-17-2
propane-1,2-diol	≥10 - ≤30	57-55-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : Causes serious eye irritation.

#### Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : No specific data.
- Eyes** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

### Indication of immediate medical attention and special treatment needed, if necessary

- Specific treatments** : No specific treatment.

## Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides
- Hazchem code** : Not available.
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Protective measures

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<b>Ingredient name</b>	<b>Exposure limits</b>
propane-1,2-diol	<b>NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2020).</b> WES-TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Particulate WES-TWA: 150 ppm 8 hours. Form: Vapor and particulates WES-TWA: 474 mg/m <sup>3</sup> 8 hours. Form: Vapor and particulates <b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Particulate TWA: 474 mg/m <sup>3</sup> 8 hours. Form: total vapour and particulates TWA: 150 ppm 8 hours. Form: total vapour and particulates <b>Safe Work Australia (Australia, 12/2019).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Particulate TWA: 150 ppm 8 hours. Form: Vapor and particulates TWA: 474 mg/m <sup>3</sup> 8 hours. Form: Vapor and particulates

### Biological exposure indices

No exposure indices known.

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Liquid. [Viscous liquid.]
- Colour** : White. / Grey.
- Odour** : Characteristic. / weak [Slight]
- Odour threshold** : Not available.
- pH** : 5.3 to 5.8 [Conc. (% w/w): 10%]
- Melting point/freezing point** : >-7°C (>19.4°F)
- Boiling point, initial boiling point, and boiling range** : 99 to 100°C (210.2 to 212°F)
- Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
butanedione	6	42.8				
ethanol	9.7	49.5	Abel-Pensky			
propionic acid	50.5	122.9	ISO 2719			
benzaldehyde	63	145.4				
propane-1,2-diol	99	210.2				
cinnamaldehyde	105	221				

- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapour pressure** :

## Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
butanedione	57	7.6	EU A.4			
ethanol	42.95	5.7				
water	23.8	3.2				
propionic acid	2.99	0.4				
propane-1,2-diol	0.15	0.02				
Castor oil, ethoxylated	<0.1	<0.013				
trimagnesium dicitrate	0.000000017	0.000000023				

**Relative vapour density** : Not available.

**Relative density** : Not available.

**Density** : 1.36 g/cm<sup>3</sup>

**Solubility(ies)** : Not available.

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
benzaldehyde	192	377.6	EU A.16
calcium diformate	292	557.6	
butanedione	365	689	
propane-1,2-diol	371	699.8	DIN 51794
propionic acid	440	824	
ethanol	455	851	DIN 51794

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Flow time (ISO 2431)** : Not available.

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : No specific data.

**Incompatible materials** : No specific data.

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

# Section 11. Toxicological information

## Information on likely routes of exposure

- Inhalation** : No known significant effects or critical hazards.  
**Ingestion** : Harmful if swallowed.  
**Skin contact** : No known significant effects or critical hazards.  
**Eye contact** : Causes serious eye irritation.

## Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : No specific data.  
**Ingestion** : No specific data.  
**Skin contact** : No specific data.  
**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium formate propane-1,2-diol	LD50 Oral	Rat	2560 mg/kg	-
	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Calcium formate propane-1,2-diol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Human	-	168 hours 500 mg	-
	Skin - Mild irritant	Woman	-	96 hours 30 %	-
	Skin - Moderate irritant	Child	-	96 hours 30 % C	-
	Skin - Moderate irritant	Human	-	72 hours 104 mg l	-

### Sensitisation

Not available.

### Potential chronic health effects

- General** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Eye contact** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Chronic toxicity

Not available.



## Section 11. Toxicological information

### Carcinogenicity

Not available.

### Mutagenicity

Not available.

### Teratogenicity

Not available.

### Reproductive toxicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Calform Plus	1320.7	N/A	N/A	N/A	N/A
Calcium formate	500	N/A	N/A	N/A	N/A
propane-1,2-diol	20000	20800	N/A	N/A	N/A

## Section 12. Ecological information

**Ecotoxicity** : No known significant effects or critical hazards.

### Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
calcium diformate propane-1,2-diol	LC50 >1000 mg/l	Daphnia - Daphnia magna	48 hours
	EC50 19000 mg/l	Aquatic plants	72 hours
	EC50 34400 mg/l	Daphnia	48 hours
	Acute LC50 1020000 µg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 710000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
propane-1,2-diol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	38 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
propane-1,2-diol	-	-	Not readily

### Bioaccumulative potential



## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
calcium diformate	-2.3	-	low
propane-1,2-diol	-1.07	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	New Zealand - Land - road/ railway	IMDG	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-
<b>Transport hazard class(es)</b>	-	-	-
<b>Packing group</b>	-	-	-
<b>Environmental hazards</b>	No.	No.	No.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

**HSNO Approval Number** : HSR002521  
**HSNO Group Standard** : Animal Nutritional and Animal Care Products  
**HSNO Classification** : ACUTE TOXICITY (oral) - Category 4  
EYE IRRITATION - Category 2

### Inventory list

**New Zealand** : Not determined.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 5/17/2023

**Date of previous issue** : No previous validation

**Version** : 0.01

### Key to abbreviations

: ADG = Australian Dangerous Goods  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
SGG = Segregation Group  
UN = United Nations

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. **THIS SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE).** In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.

For additional information contact:

Elanco Animal Health

0011+1-877-352-6261

0011+1-800-428-4441