SAFETY DATA SHEET

ADDCON XF SUPERFINE

ADDCON XF SUPERFINE contains no dangerous substances

1. Identification of the substance / preparation and company / undertaking

Product name	ADDCON XF SUPERFINE
Chemical product name	Premixture of salts for formic and propionic acid and benzoic acid
Synonyms	
Manufacturer / Supplier	ADDCON EUROPE GmbH Säurestr. 1, Areal E D-06749 Bitterfeld-Wolfen GERMANY ADDCON GmbH Kaiserstraße 1 D-53113 Bonn GERMANY Phone: +49-228-91910-0 Fax: +49-228-91910-60 info@addcon.com www.addcon.com
Emergency Telephone number	+49 (0) 3493 899899 5 (office time: Mo – Fr, 8 a.m. – 5 p.m.)
e-mail-address of person responsible for this SDS	thomas.ohlmann@addcon.com
Recommended use	Preservative for feeding stuffs

2. Hazards identification

The preparation is not classified as dangerous according to directive 67/548/EEC and its amendments.

Classification	Xi, irritant
Human health hazards	Dust may cause irritation of eyes and by inhalation.
Environmental hazards	Based on the available data of this product no hazardous properties are known.
Physical / chemical hazards	Possibility of explosion exists under dusty conditions. Hygroscopic (absorbs moisture from the air).

3. Composition / information on ingredients

Substance / preparation : preparation

Chemical name	CAS no.	%	EC- no. *	classification
Calcium formate See section 16 for the full text of the R-phrases declared above.	544-17-2	≈ 35	208-863-7	GHS05; H318 Xi, R41
Benzoic acid See section 16 for the full text of the R-phrases declared above.	65-85-0	≈ 5	200-618-2	GHS07; H302/319 Xn, R22; Xi, R36

*** EC-No. means EINECS- or ELINCS-number.**

4. First-aid measures

Effects and symptoms

Inhalation	Dust may cause irritation.
Ingestion	By ingestion of large amounts may cause harmful.
Skin contact	Contact may cause transient irritation.
Eye contact	Contact may cause irritation.

First-aid measures

General	Move exposed person to fresh air.
Inhalation	If inhaled, remove to fresh air. Obtain medical attention if symptoms occur.
Ingestion	If swallowed, rinsed mouth with water (only if the person is conscious). Obtain medical attention if symptoms occur.
Skin contact	Rinse with plenty of running water. Remove contaminated clothes and shoes. Obtain medical attention if symptoms occur.
Eye contact	Rinse with plenty of running water. Obtain medical attention if symptoms occur.
First-aid facilities:	No special recommendations.

5. Fire-fighting measures

Extinguishing media

Small / Large fire suitable	Use water spray, dry chemical or CO_2.

5. Fire-fighting measures

Unusual fire / explosion hazards	Fine dust clouds may form explosive mixtures with air.
Hazardous thermal decomposition products	In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, calcium oxide.
Special fire-fighting procedures	No special measures required.
Protection of fire-fighters	Wear suitable protective clothing. Self-contained breathing apparatus.

6. Accidental release measures

Personal precautions	Avoid creating dusty conditions and prevent wind dispersal. Use suitable protective equipment (section 8). Keep away from sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilating, lighting and material heating) equipment.
Environmental precautions	No special measures required.
Clean-up methods	
Small spill and leak	Vacuum or sweep up material and place in a designated, labelled waste container. Clean up affected area with a large amount of water.
Large spill and leak	Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

Handling	Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid creating dusty conditions and prevent wind dispersal. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Take measures against static discharge. Keep away from sources of ignition.
Storage	Store in a dry, cool and well-ventilated area (due to limited adsorption properties). The product has been produced and packaging in accordance with strict quality practices. Maintain this quality level by storing this product away from other chemicals.
Remarks	Electrostatic charging can occur during unloading or processing of this material. If necessary take precautionary measures against static discharges. The product should be handled with the care usual when dealing with chemicals.
Packaging materials	
Suitable	Paper, Polyethylene or Big Bags (polypropylene).

Note: See section 10 for stability and reactivity.

8. Exposure controls / personal protection

Engineering measures	Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Hygiene measures	When using does not eat, drink or smoke. Wash hands after handling compounds and before eating, smoking and using the lavatory at the end of the day.

Control parameters — **Derived effect levels**

DNEL — Calcium formate

Population	Effects	Exposure	value
Workers	Systemic	Inhalation – long / short term	337 mg/m³
		Dermal – long / short term	4780 mg/kg bw/day
Workers	Local	Dermal – long / short term	16,7 mg/cm²
Consumers	Systemic	Oral – long term	23,9 mg/kg bw/day
		Inhalation – long / short term	83,2 mg/m³
		Dermal – long / short term	2390 mg/kg bw/day
Consumers	Local	Dermal – long / short term	8,3 mg/cm²

Predicted effect concentrations

PNEC — Calcium formate

Compartment detail	Value	Method detail	remarks
Soil	1,5 mg/kg dwt 2,221 mg/l	Assessment factors	
Sediment	13,4 mg/kg dwt	Equilibrium partitioning	

8. Exposure controls / personal protection

PNEC Calcium formate

Compartment detail	Value	Method detail	remarks
Marine water	0,2 mg/l 1,34 mg/kg dwt	Assessment factors Equilibrium partitioning	
Fresh water	2 mg/l	Assessment factors	

Personal protective equipment – Production scale

Respiratory system	A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.
Skin and body	Working clothes
Eyes	Wear chemical goggles.
Hands	Wear suitable gloves.
Recommended material(s)	> 8 hours (breakthrough time): Nitril rubber, butyl rubber, neoprene, Viton, PVC. Replace damaged gloves.

Advice on personal protection is applicable for high exposure levels. Select proper personal protection based on a risk assessment of the actual situation.

9. Physical and chemical properties

Physical state	Solid, powder, hygroscopic
Colour	White - greyish
Odour	Odourless
pH (concentration 10%)	6 – 10
Boiling point	Ca. 250 °C (decomposition)
Melting point	> 120 °C (partially decomposition)
Flash point	> 120 °C.
Lower explosion limit	See remarks.
Upper explosion limit	See remarks.
Auto-ignition temperature	> 300 °C (Wire basket)
Density (g/cm$_3$)	Not available.
Bulk density	0,5 – 0,8 kg/m^3
Solubility in water	ca. 300 g/100 ml (20°C)
Solubility	Partly soluble in the following materials: cold water.
Molecular weight	Not available.
Minimum ignition energy	Dust (particle size < 63µm): 10^5 – 10^7 mJ
Dust explosion class	See remarks.
Remarks	Dust / powder (particle size <63 µm): max. explosion pressure = 8,7 bar Max. increasing of pressure = 77 bar/sec In case of potential hazardous local circumstances, ADDCON advises the customer to take proper measures on the hardware / procedures to eliminate the risk of explosions. More detailed information on the physical and chemical properties can be requested from the supplier.

10. Stability and reactivity

Stability	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	Exposure to sources of heat, sources of ignition, open flame.
Materials to avoid	Oxidizing substances, strong acids and bases; moisture.
Hazardous decomposition products	In case of fire: see section 5.

11. Toxicological information

Potential acute health effects

Inhalation Dust may cause irritation.

Ingestion By ingestion of large amounts may cause harmful.

Skin contact Contact may cause transient irritation.

Eye contact Contact may cause irritation. Causes serious eye damage.

Acute toxicity

Product / ingredient name	Result	Species	Dose	Exposure
Benzoic acid	LD50 Oral LD50 Dermal	Rat Rabbit	1700 mg/kg >5000 mg/kg	- -
	LC50 Inhalativ	Rat	12,2 mg/l	4 h
Calcium formate	LD50 oral	Rat – male	2650 mg/kg	OECD 401

Primary irritation

Product / ingredient name	Test	Species	Evaluation	Method
Benzoic acid	Irritation	Rabbit	Irritate	
Calcium formate	Irritation – skin Irritation – eyes	Rabbit	Non-Irritate corrosive	OECD 404 OECD 405

Sensitization May cause sensibilization.

Potential chronic health effects

Chronic effects 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 No specific data.

Carcinogenicity Not listed by ACGIH, IARC, or NTP.

Mutagenicity

Product / ingredient name	Test	Experiment	Result
Calcium formate	OECD 471	In vitro	negative

Teratogenicity No specific data.

Reproductive toxicity No specific data.

Conclusion / summary

Remarks The product is not tested. All information are from the pure ingredients.

12. Ecological information

Environmental effects Readily biodegradable. This product shows a low bioaccumulation potential.

Aquatic ecotoxicity

Product / ingredient name	Test	Result	Species	Exposure
Benzoic acid	LC50	44.6 mg/l	Fish	96 h
	EC50 EC50	102 mg/l 252 mg/l	Daphnie Fish	24h 48h

Persistence / degradability

Product / ingredient name	Aquatic ´half-life	Photolysis	Biodegradability
Benzoic acid			BOD(28)/COD: >70 % (OECD 301)
Calcium formate			Readily BOD(28):86 % (OECD 306)

Product / ingredient name	$LogP_{ow}$	BCF	Potential
Calcium formate	-2,3		low

12. Ecological information

Other adverse effects	No known significant effects or critical hazards.
AOX	The product does not contain organically bound halogens which could lead to an AOX (Absorbable Organically bound Halogens) value in waste water.
Mobility	For data on physical state and solubility see section 9.

13. Disposal considerations

Methods of disposal (waste of residues; contaminated packaging)	Examine possibilities for re-utilisation. Product residues and un-cleaned empty containers should be packaged, sealed, labelled and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When un-cleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues. For disposal within the EC, the appropriate code according to the European Waste List (EWL) should be used. It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes according to the EWL.

14. Transport information

International transport regulations

Regulatory information	UN - Number	Proper shipping name	class	PG*	Label	Additional information
ADR/RID Class	Not regulated.	-	-	-	-	-
ADNR Class	Not regulated	-	-	-	-	-
IMDG Class	Not regulated	-	-	-	-	-
IATA Class	Not regulated	-	-	-	-	-

PG* : Packing group

15. Regulatory information

According to EU directives 67/548/EEC and 1999/45/EC this product does not require labelling.

EC-regulations


Xi, irritating

Risk phrases

41 – risk of serious eye damage

Safety phrases

2 – Keep out of the reach of children.
25 – Avoid contact with eyes.
26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
39 – Wear eye/face protection.
45 – In case of accident or feel unwell, seek medical advice immediately (show the label where possible).

Remarks

WGK (water danger/protection): 1
United Kingdom Occupational Exposure Limits / maximum Exposure Limits
Canadian Environmental Protection Act (CEPA): The ingredients are on the Domestic Substances List (DSL) and are acceptable for use under the provisions of CEPA.
US Federal: The ingredients are listed on the TSCA inventory. The product has GRAS status.

16. Other information

Full text of R phrases referred to in sections 2 and 3 – United Kingdom (UK)	R22 / H302 – harmful if swallowed R36 / H319 – irritating to eyes / risk of serious damages to eyes R41 / H318 – causes serious eye damage
Full text of classifications referred to in sections 2 and 3 – United Kingdom (UK)	Xn – harmful Xi – irritating GHS05 - corrosive GHS07 - Warning
Information	Department QS, AS Tel.: +49 (0) 3493 899899-5
Internal code	SDB_AXFSF_E_0003
History	

16. Other information

Date of printing	18.03.2014
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Version	5

Notice to reader

The information contained in the Safety Data Sheet is based on our data available on the data of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.
The user is responsible for ensuring that appropriate precautions are taken and for satisfying them that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.

Training advice	Handling of this substance or preparation is restricted to skilled personal only.
Source of key data	Literature data and/or investigation reports are available through the manufacturer.
Alterations compared to the previous version	Alterations compared to the previous version are marked with a little (blue) triangle.