SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name ALIETTE 80 WP

Product code (UVP) 05920965

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

Use Fungicide

1.3 Details of the supplier of the safety data sheet

Supplier
Bayer AG
Kaiser-Wilhelm-Allee 1
51373 Leverkusen
Germany

Telefax +49(0)2173-38-7394

Responsible Department
Substance Classification & Registration
+49(0)2173-38-3409 (during business hours only)
Email: BCS-SDS@bayer.com

1.4 Emergency telephone no.

Emergency telephone no.
Global Incident Response Hotline (24h)
+1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Serious eye damage: Category 1
H318 Causes serious eye damage.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Fosetyl-Aluminium

Signal word: Danger

Hazard statements

H318	Causes serious eye damage.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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 CENTER/doctor/ physician.
P501	Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Wettable powder (WP)
Fosetyl-aluminium 80%

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification REGULATION (EC) No 1272/2008	Conc. [%]
Fosetyl-Aluminium	39148-24-8 254-320-2	Eye Dam. 1, H318	80,00
Alcohols, C11-14-iso-, C13-rich	68526-86-3 271-235-6 01-2119454259-32-XXXX	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	>= 0,25 – < 2,5
Ethoxylated Alcohols C10-C16	68002-97-1 500-182-6	Eye Dam. 1, H318 Aquatic Acute 3, H412	>= 0,25 – < 2,5
Kaolin	1332-58-7 310-194-1	Not classified	> 1,0
Synthetic amorphous silica	112926-00-8 231-545-4 01-2119379499-16-xxxx	Not classified	> 1,0

Further information

Ethoxylated Alcohols C10-C16	68002-97-1	M-Factor: 1 (acute)

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. When symptoms develop and persist, seek medical advice.
Inhalation	Move to fresh air.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.
Eye contact	Wash off immediately with plenty of water for at least 15 minutes. Eye treatment by an ophthalmologist.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Keep patient warm and at rest.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Skin, eye and mucous membrane irritation

4.3 Indication of any immediate medical attention and special treatment needed

Risks	This product is not a cholinesterase inhibitor.
Treatment	Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. There is no specific antidote. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Nitrogen oxides (NOx), Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes.
Further information	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Use approved industrial vacuum cleaner for removal. Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Check also for any local site procedures.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion No special precautions required.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Remove contaminated clothing immediately and dispose of safely. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Fosetyl-Aluminium	39148-24-8	5 mg/m3 (TWA)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet. Material: Nitrile rubber Rate of permeability: > 480 min Glove thickness: > 0,4 mm Protective index: Class 6 Directive: Protective gloves complying with EN 374.
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).
Skin and body protection	Wear standard coveralls and Category 3 Type 5 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	powder, fine
Colour	light beige
Odour	characteristic
Odour Threshold	No data available
pH	3,0 - 4,0 (1 %) (23 °C) (deionized water)
Melting point/range	No data available

Boiling Point	No data available
Flash point	Not relevant
Flammability	The product is not highly flammable.
Auto-ignition temperature	No data available
Minimum ignition energy	> 10 mJ MIE Cluster evaluated acc. to BTS report 2016/00141a
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	60 g/m3
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	No data available
Bulk density	ca. 0,37 g/ml (loose)
Water solubility	dispersible
Partition coefficient: n-octanol/water	Fosetyl Aluminium: log Pow: -2,1
Viscosity, kinematic	No data available
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	
Thermal decomposition	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid	Extremes of temperature and direct sunlight. Exposure to moisture.
10.5 Incompatible materials	Store only in the original container.
10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 (Rat) 8.000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 5,11 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient fosetyl aluminium.
Acute dermal toxicity	LD50 (Rat) > 5.000 mg/kg
Skin corrosion/irritation	No skin irritation (Rabbit)
Serious eye damage/eye irritation	Severe eye irritation. (Rabbit)
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test The value mentioned relates to the active ingredient fosetyl aluminium.

Assessment STOT Specific target organ toxicity – single exposure

Fosetyl Aluminium: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Fosetyl Aluminium did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Fosetyl Aluminium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Fosetyl Aluminium was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Fosetyl Aluminium did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Fosetyl Aluminium did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 122 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient fosetyl aluminium.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) > 100 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient fosetyl aluminium.
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus (green algae)) > 16 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient fosetyl aluminium.

12.2 Persistence and degradability

Biodegradability	Fosetyl Aluminium: rapidly biodegradable
Koc	Fosetyl Aluminium: Koc: 0,1

12.3 Bioaccumulative potential

Bioaccumulation	Fosetyl Aluminium: Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil	Fosetyl Aluminium: Highly mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment	Fosetyl Aluminium: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information	No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.
Contaminated packaging	Not completely emptied packagings should be disposed of as hazardous waste.
Waste key for the unused product	**02 01 08*** agrochemical waste containing hazardous substances

SECTION 14: TRANSPORT INFORMATION

According to ADN/ADR/RID/IMDG/IATA not classified as dangerous goods.

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

14.1 – 14.5 Not applicable.
14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

Further information

WHO-classification: U (Unlikely to present acute hazard in normal use)

15.2 Chemical safety assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level

MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

Reason for Revision: Section 3: Composition / Information on Ingredients. Section 9: Physical and Chemical Properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.