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

1.1 Product identifier
Trade name ALIETTE FLASH (LB) WG80 10X1KG BOX TZ
Product code (UVP) 05921589

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.
Eye irritation: Category 2
H319 Causes serious eye irritation.

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: Warning
Hazard statements
H319 Causes serious eye irritation.
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.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

2.3 Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature
Water dispersible granules (WG)
Fosetyl aluminium 80%

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

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No. / EC-No. / REACH Reg. No.</th>
<th>Classification REGULATION (EC) No 1272/2008</th>
<th>Conc. [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fosetyl Aluminium</td>
<td>39148-24-8 254-320-2</td>
<td>Eye Dam. 1, H318</td>
<td>80,00</td>
</tr>
<tr>
<td>Ethoxylated-propoxylate fatty alcohol (block copolymer)</td>
<td>68154-97-2</td>
<td>Acute Tox. 4, H302 Eye Dam. 1, H318</td>
<td>&gt; 1,0 – &lt; 25,0</td>
</tr>
<tr>
<td>Lignosulfonic acid, sodium salt, sulfomethylated</td>
<td>68512-34-5</td>
<td>Eye Irrit. 2, H319</td>
<td>&gt; 3,0 – &lt; 10,0</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2 215-185-5</td>
<td>Skin Corr. 1A, H314</td>
<td>&gt; 1,0 – &lt; 5,0</td>
</tr>
<tr>
<td>Synthetic amorphous silica</td>
<td>112926-00-8 231-545-4</td>
<td>Not classified</td>
<td>&gt; 1,0</td>
</tr>
<tr>
<td>Bentonite</td>
<td>1302-78-9 215-108-5</td>
<td>Not classified</td>
<td>&gt; 1,0</td>
</tr>
</tbody>
</table>

Further information
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

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: Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Use personal protective equipment.
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

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.

Hygiene measures

Remove contaminated clothing immediately and dispose of safely. Avoid contact with skin, eyes and clothing. Wash hands immediately after work, if necessary take a shower.

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.

Suitable materials

Aluminium composite film (min. 0,007 mm Aluminium)

7.3 Specific end use(s)

Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fosetyl Aluminium</td>
<td>39148-24-8</td>
<td>10 mg/m3 (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>2 mg/m3 (TLV)</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer CropScience "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**
Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and 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.

**Eye protection**
Wear goggles (conforming to EN166, Field of Use = 5 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.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

- **Form**: water-dispersible granules
- **Colour**: brown
- **pH**: 3 - 4,5 at 1 % (23 °C) (CIPAC D water (342ppm))
- **Flammability (solid, gas)**: The product is not highly flammable.
- **Bulk density**: 0,62 - 0,66 g/ml (loose)
- **Water solubility**: dispersible
- **Partition coefficient: n-octanol/water**: Fosetyl Aluminium: log Pow: -2,1
- **Surface tension**: 28 mN/m at 20 °C
- **Oxidizing properties**: No oxidizing properties
- **Explosivity**: Not explosive

9.2 Other information
Further safety related physical-chemical data are not known.

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**SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity
- **Thermal decomposition**: Stable under normal conditions.
- **Self heating**: not self-heating

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.

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) > 5.000 mg/kg |
| Acute dermal toxicity | LD50 (Rat) > 5.000 mg/kg |

Skin irritation
Slight irritant effect - does not require labelling. (Rabbit)

Eye irritation
Irritating to eyes. (Rabbit)

Sensitisation
Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test

Assessment repeated dose toxicity
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.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish
LC50 (Onchorhynchus mykiss (rainbow trout)) > 120 mg/l
Exposure time: 96 h

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) 37 mg/l
Exposure time: 48 h

Toxicity to aquatic plants
EC50 (Desmodesmus subspicatus (green algae)) 27,7 mg/l
Growth rate; Exposure time: 72 h

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. Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations.

Waste key for the unused product  
02 01 08* agrochemical waste containing dangerous 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

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

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.

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