SAFETY DATA SHEET
ACCORDING TO 1907/2006/EC, 453/2010/EU, 2015/830/EU (REACH)

BUBBLE BUSTER

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier
Product Name: BUBBLE BUSTER
Product description: White emulsion liquid
Product Type: Antifoam Emulsion

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant uses: Agriculture, Antifoam / Defoaming agent for suppression of foam in the spray tank.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet
Rolfes Agri (Pty) Ltd
288 Mundt Street
Waltloo
Pretoria
South Africa
Tel: +27(0)12 803 0145
Fax: +27(0)12 803 8418

1.4 Emergency telephone number
National advisory body/Poison Centre

Telephone number: SOUTH AFRICA
Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
+27(0)82 446 8946
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:
CLP Regulation (EC) no 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) no 1272/2008.

- Acute Tox. 4: Acute Toxicity Oral, Category 4 - H302
- Acute Tox. 4: Acute Toxicity Dermal, Category 4 - H312

2.2 Label elements
CLP Regulation (EC) no 1272/2008:

Hazard pictogram(s):

- Signal word: Warning
- Hazard statement(s): H302 - Harmful if swallowed. H312 - Harmful in contact with skin.

Precautionary statement(s):
- P101 – If medical advice is needed, have product container or label at hand
- P102 – Keep out of reach of children
- P103 – Read label before use
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P322 - Specific measures (see Section 4 - 6 on this label).
- P330 - Rinse mouth.
- P363 - Wash contaminated clothing before reuse.
- P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

2.3 Other hazards
Non-applicable

SECTION 3: Composition/information on ingredients

3.1 Substance: Not applicable

3.2 Mixture:
Chemical description: Silicone emulsion
Component(s):

<table>
<thead>
<tr>
<th>Chemical Name:</th>
<th>5-Chloro-2-methyl-3(2H)-isothiazolone, mixt. with 2-methyl-3(2H)-isothiazolone</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS:</td>
<td>55965-84-9</td>
</tr>
<tr>
<td>EC:</td>
<td>247-500-7</td>
</tr>
<tr>
<td>Index:</td>
<td>-</td>
</tr>
<tr>
<td>REACH:</td>
<td>-</td>
</tr>
<tr>
<td>Formulation:</td>
<td>Polydimethylsiloxane, Dimethyl siloxane 100 g/l</td>
</tr>
</tbody>
</table>
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 for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:
Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Do NOT give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person at rest and warm. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary.

By skin contact:
Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists. Wash clothing before re-use.

By eye contact:
Immediately flush eyes with lukewarm water or saline solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Check for and remove any contact lenses after 5 minutes. Get medical attention if necessary.

By ingestion / aspiration:
Have victim rinse mouth thoroughly with water. Give water to dilute the material if victim is alert and not convulsing. Induce vomiting immediately as directed by medical personnel. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, rinse mouth and administer more water. Never give anything by mouth to an unconscious person. Qualified medical personnel should perform administration of oxygen. Seek medical advice if necessary.

4.2 Most important symptoms and effects, both acute and delayed
No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : None.
Specific treatments : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Fire Extinguishing Media

Suitable extinguishing media:
Water spray, water fog, alcohol-resistant foam, carbon dioxide, dry chemical.

Unsuitable extinguishing media:
No information available.

5.2 Special hazards arising from the substance or mixture

Hazardous thermal decomposition products:
On burning will emit Carbon oxide, Silicon oxides.

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Slippery when spilt. Avoid accidents, clean up immediately. Wear appropriate personal protective equipment.

6.2 Environmental precautions:
Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up
Spills:
Collect in containers for disposal. Wash contaminated surfaces to remove any residues. Minimize use of water to prevent environmental contamination.

Large Spills:
Prevent spillage or further leakage if it is safe to do so. Contain spillage with sand bags or by other means. Absorb with earth, sand or absorbent material. Dig up heavily contaminated soil. Flush with water to remove any residues. Keep product and wash water out of drains, sewers, ditches and waterways.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

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 (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
Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

C.- Technical recommendations to prevent ergonomic 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 subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A.- Technical measures for storage
Minimum Temp.: 5 °C
Maximum Temp.: 30 °C
Maximum time: 36 Months

B.- General conditions for storage
Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5. Keep containers closed when not in use - check regularly for leaks.

7.3 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.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No specific occupational exposure limit has been established.

8.2 Exposure controls

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

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.

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. Possible: safety glasses with side-shields.

Skin protection

Hand protection:
Protective gloves against minor risks.

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:
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

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. No significant release into the air is expected.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
For complete information, please refer to product datasheet.

Appearance
Physical state: Liquid (Antifoam Emulsion)
Colour: White
Odour: Mild paint odour

Volutility:
Boiling point at atmospheric pressure: > 35°C
Vapour pressure at 20 ºC: No data available
Vapour pressure at 50 ºC: No data available
Evaporation rate at 20 ºC: No data available

Product description:
Density at 20 ºC: 1.00 g/ml
Relative density at 20 ºC: Non-applicable
**BUBBLE BUSTER**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic viscosity at 20 ºC</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Kinematic viscosity at 20 ºC</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Kinematic viscosity at 40 ºC</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>pH</td>
<td>5.96 - 6.55</td>
</tr>
<tr>
<td>Vapour density at 20 ºC</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water 20 ºC</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Solubility in water at 20 ºC</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility properties</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No explosive properties</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Non-applicable *</td>
</tr>
</tbody>
</table>

**Flammability:**
- Flash Point: > 100 ºC
- Autoignition temperature: Non-applicable *
- Lower flammability limit: Non-applicable *
- Upper flammability limit: Non-applicable *

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

**9.2 Other information**
No additional information.

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**SECTION 10: Stability and reactivity**

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

**10.2 Chemical stability:**
The product is stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions:**
Hazardous polymerization does not occur.

**10.4 Conditions to avoid:**
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Conditions</th>
<th>None established</th>
<th>None established</th>
<th>None established</th>
<th>None established</th>
<th>None established</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock and friction</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Contact with air</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Increase in temperature</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunlight</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Humidity</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**10.5 Incompatible materials:**

<table>
<thead>
<tr>
<th>Material</th>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acids</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Can react with strong oxidizing agents</td>
</tr>
</tbody>
</table>

**10.6 Hazardous decomposition products:**
On decomposition emits toxic fumes of silicon dioxide, carbon oxides and traces of incompletely burned carbon compounds and formaldehyde.

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

<table>
<thead>
<tr>
<th>Route of Administration</th>
<th>LD&lt;sub&gt;50&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>2 000 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>2 000 mg/kg</td>
</tr>
</tbody>
</table>
**Dangerous health implications:**
Low ingestion hazard in normal use. Irritates respiratory passages very slightly. Direct contact may cause temporary redness and discomfort.

A. Ingestion (acute effect):
- Acute toxicity: Based on available data, the classification criteria are met, as it does contain substances classified as dangerous for this effect. Refer to Section 2.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

B. Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

C. Contact with the skin and the eyes (acute effect):
- Contact with the skin: Based on available data, the classification criteria are met, as it does contain substances classified as dangerous for this effect. Refer to Section 2.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

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.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

E. Sensitizing effects:
- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

F. Specific target organ toxicity (STOT)-time exposure:
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

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.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

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.

**Other information:**
Non-applicable
Occurrence of the product itself is not available.

12.1 Toxicity:

<table>
<thead>
<tr>
<th>LC50 (96h)</th>
<th>Acute toxicity</th>
<th>Species</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 000mg/l</td>
<td>Oncorhynchus</td>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>&gt; 10 000mg/l</td>
<td>Lepomis macrochirus</td>
<td>Fish</td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability:
Siloxanes are removed from water by sedimentation or binding to sewage sludge. In soil, siloxanes are degraded.

12.3 Bio accumulative potential:
No bioaccumulation potential.

12.4 Mobility in soil:
No information found.

12.5 Results of PBT and vPvB assessment:
No information found.

12.6 Other adverse effects:
Fate and effects in waste water treatment plants:
Removed > 90% by binding onto sewage sludge. No adverse effects on bacteria. The siloxanes in this product do not contribute to the BOD.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

**Product**
Methods of disposal:
The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. 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.

Hazardous waste:
No information available.

**Packaging**
Methods of disposal:
The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions:
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

<table>
<thead>
<tr>
<th></th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway transport (AND/ADNR)</th>
<th>Sea Transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
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</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>14.3 Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>14.5 Environmental hazards</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable
Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable
Active substances not included in Annex I under Regulation (EU) No 528/2012: Non-applicable
REGULATION (EU) No 689/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ...):
Non-applicable

Other legislation:
Law No.360 / 2003 on the dangerous substances and preparations
Law nr.349 / 2007 regarding the reorganization of the institutional framework for chemicals management
Law no.249 / 2011 to amend article 4 of Law nr.349 / 2007 on the reorganization of the institutional framework chemicals management
Emergency Ordinance no.60 / 2013 for completing art. 4 para. (1) of Law no. 349/2007 on the reorganization framework institutional management of chemicals GD Nr.1408 / 2008 and Annexes 1-6 on classification,
packaging and labeling of dangerous substances GD nr.937 / 2010 and Annexes 1 to 5 on the classification, packaging and labeling in the marketing of dangerous preparations
GD no.398 / 2010 establishing measures to enforce the provisions of Regulation (EC) nr.1272 / 2008 on classification, labeling and packaging of substances and mixtures.
Decision no. 1218/2006 establishing minimum safety requirements for ensuring occupational health and protection workers from risks related to chemical agents.
Law no. 319/2006 - Law on safety and health at work
GD 621/2005 on the management of packaging and packaging waste.

Specific provisions in terms of protecting people or the environment:
It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

15.2 Chemical Safety Assessment:
The supplier has not carried out evaluation of chemical safety.

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) Nº 1907/2006 (Regulation (EU) Nº 453/2010, Regulation (EC) Nº 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:
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.

Texts of the legislative phrases mentioned in section 3:
Non-applicable

CLP Regulation (EC) nº 1272/2008:
Acute Tox. 4: Acute Toxicity Oral, Category 4 - H302
Acute Tox. 4: Acute Toxicity Dermal, Category 4 - H312

Classification procedure:
Non-applicable

Advice related to training:
Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:
http://esis.jrc.ec.europa.eu
http://echa.europa.eu
http://eur-lex.europa.eu

Relevant P-, H- and EUH-phrases (number and full text)
H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
P101 – If medical advice is needed, have product container or label at hand
P102 – Keep out of reach of children
P103 – Read label before use
BUBBLE BUSTER

P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P322 - Specific measures (see Section 4 - 6 on this label).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
CL50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
KOC: PARTITION COEFFICIENT OF ORGANIC CARBON

Date of revision : 18/07/2019
Version : 5

Notice to reader
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