

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2019

Reviewed on 05/24/2019

1 Identification

- **Product identifier**
- **Trade name:** GRIFFON WDF-05 BOT 1L*8 L1
- **Application of the substance / the mixture** Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bison International
Dr.A.F.Philipsstraat 9
NL-4462 EW Goes
PO Box 160
NL-4460 AD Goes
tel. +31 88 3235700
fax. +31 88 3235800
e mail: sds@boltonadhesives.com
- **Information department:** Bison QESH
- **Emergency telephone number:** +31 88 3235700. Operating hours mo-fr 08:00h-17:00h (CET)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
tetrahydrofuran
butanone

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Hazard statements

- H225 Highly flammable liquid and vapor.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.
- H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P261 Avoid breathing vapours.
- P281 Use personal protective equipment as required.
- P370+P378 In case of fire: Use to extinguish: Water haze, Alcohol resistant foam, Fire-extinguishing powder, Carbon dioxide.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with national regulations.

Classification system:

NFPA ratings (scale 0 - 4)



Health = 2
Fire = 3
Reactivity = 0

HMIS-ratings (scale 0 - 4)



HEALTH 2 Health = 2
FIRE 3 Fire = 3
REACTIVITY 0 Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

Mixture of the substances listed below with nonhazardous additions.
Adhesive

Dangerous components:

109-99-9	tetrahydrofuran	50-100%
78-93-3	butanone	25-50%

4 First-aid measures

Description of first aid measures

- General information: No special measures required.
- After inhalation:
Supply fresh air; consult doctor in case of complaints.
No special measures required.
- After skin contact: Generally the product does not irritate the skin.

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- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Water haze
Alcohol resistant foam
Fire-extinguishing powder
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Send for recovery or disposal in suitable receptacles.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:

109-99-9	tetrahydrofuran	100 ppm
78-93-3	butanone	200 ppm
9002-86-2	polyvinyl chloride	3 mg/m ³
112945-52-5	fumed silica	18 mg/m ³
9003-39-8	Polyvinylpyrrolidon	51 mg/m ³

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64-17-5	ethanol	1,800 ppm
104-76-7	2-Ethyl-1-hexanol	0.1 ppm
67-63-0	propan-2-ol	400 ppm

PAC-2:

109-99-9	tetrahydrofuran	500 ppm
78-93-3	butanone	2700* ppm
9002-86-2	polyvinyl chloride	33 mg/m ³
112945-52-5	fumed silica	100 mg/m ³
9003-39-8	Polyvinylpyrrolidon	560 mg/m ³
64-17-5	ethanol	3300* ppm
104-76-7	2-Ethyl-1-hexanol	100 ppm
67-63-0	propan-2-ol	2000* ppm

PAC-3:

109-99-9	tetrahydrofuran	5000* ppm
78-93-3	butanone	4000* ppm
9002-86-2	polyvinyl chloride	200 mg/m ³
112945-52-5	fumed silica	630 mg/m ³
9003-39-8	Polyvinylpyrrolidon	20,000 mg/m ³
64-17-5	ethanol	15000* ppm
104-76-7	2-Ethyl-1-hexanol	200 ppm
67-63-0	propan-2-ol	12000** ppm

7 Handling and storage

Handling:
Precautions for safe handling

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Storage class: 3

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 · **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

 · **Additional information about design of technical systems:** No further data; see item 7.

 · **Control parameters**

 · **Components with limit values that require monitoring at the workplace:**

109-99-9 tetrahydrofuran

PEL	Long-term value: 590 mg/m ³ , 200 ppm
REL	Short-term value: 735 mg/m ³ , 250 ppm Long-term value: 590 mg/m ³ , 200 ppm
TLV	Short-term value: 295 mg/m ³ , 100 ppm Long-term value: 147 mg/m ³ , 50 ppm Skin

78-93-3 butanone

PEL	Long-term value: 590 mg/m ³ , 200 ppm
REL	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
TLV	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm BEI

 · **Ingredients with biological limit values:**

109-99-9 tetrahydrofuran

BEI	2 mg/L Medium: urine Time: end of shift Parameter: Tetrahydrofuran
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78-93-3 butanone

BEI	2 mg/L Medium: urine Time: end of shift Parameter: MEK
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 · **Additional information:** The lists that were valid during the creation were used as basis.

 · **Exposure controls**

 · **Personal protective equipment:**

 · **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.

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- **Breathing equipment:**
Suitable respiratory protective device recommended.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Recommended filter device for short term use:** Filter A
- **Protection of hands:**
Solvent resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
Butyl rubber, BR
Recommended thickness of the material: > 0,7 mm
- **Penetration time of glove material**
For the mixture of chemicals mentioned below the penetration time has to be at least 120 minutes (Permeation according to EN 374 Part 3: Level 4).
- **Eye protection:**



Tightly sealed goggles

Goggles recommended during refilling.

- **Body protection:** Solvent resistant protective clothing

9 Physical and chemical properties

- | | |
|--|------------------------------------|
| · Information on basic physical and chemical properties | |
| · General Information | |
| · Appearance: | |
| Form: | Fluid |
| Color: | According to product specification |
| · Odor: | Characteristic |
| · Odor threshold: | Not determined. |
| · pH-value: | Not determined. |
| · Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | 65.5 °C (149.9 °F) |
| · Flash point: | -21 °C (-5.8 °F) |
| · Flammability (solid, gaseous): | Not applicable. |
| · Ignition temperature: | 230 °C (446 °F) |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not selfigniting. |

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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	1.5 Vol %
Upper:	12 Vol %
· Vapor pressure at 20 °C (68 °F):	200 hPa (150 mm Hg)
· Density at 20 °C (68 °F):	0.965-0.966 g/cm ³ (8.053-8.061 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	675 mPas
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	83.1 %
Water:	0.0 %
VOC content:	83.07 %
· Solids content:	16.9 %
· Other information	All relevant physical data were determined for the mixture. All non-determined data are not measurable or not relevant for the characterization of the mixture.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Danger of toxic pyrolysis products.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

109-99-9 tetrahydrofuran

Oral	LD50	2500 mg/kg (rat)
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78-93-3 butanone

Oral	LD50	3300 mg/kg (rat)
------	------	------------------

Dermal	LD50	5000 mg/kg (rabbit)
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- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

9002-86-2	polyvinyl chloride	3
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9003-39-8	Polyvinylpyrrolidon	3
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64-17-5	ethanol	1
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67-63-0	propan-2-ol	3
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

· **Uncleaned packagings:**

· **Recommendation:**

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

14 Transport information

· **UN-Number**

· **DOT, ADR/ADN, IMDG, IATA**

UN1133

· **UN proper shipping name**

· **DOT**

Adhesives

· **ADR/ADN**

1133 ADHESIVES

· **IMDG, IATA**

ADHESIVES

· **Transport hazard class(es)**

· **DOT**

· **Class**

3 Flammable liquids

· **Label**

3

· **ADR/ADN**

· **Class**

3 (F1) Flammable liquids

· **Label**

3

· **IMDG, IATA**

· **Class**

3 Flammable liquids

· **Label**

3

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· Packing group	III
· DOT, ADR/ADN, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	-
· EMS Number:	F-E,S-D
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· ADR/ADN	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Remarks:	Under certain conditions substances in Class 3 (flammable liquids) can be classified in packinggroup III. See IMDG, Part 2, Chapter 2.3, Paragraph 2.3.2.2
· UN "Model Regulation":	UN 1133 ADHESIVES, 3, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

78-93-3 butanone

67-63-0 propan-2-ol

· **TSCA (Toxic Substances Control Act):**

109-99-9 tetrahydrofuran

78-93-3 butanone

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9002-86-2	polyvinyl chloride
57583-35-4	2-ethylhexyl 10-ethyl- 4,4-dimethyl-7-oxo-8- oxa-3,5-dithia-4-stannatetradecanoate
57583-34-3	2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-methyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate
9003-39-8	Polyvinylpyrrolidon
64-17-5	ethanol
7659-86-1	2-ethylhexyl mercaptoacetate
32724-62-2	1,4-Bis[(2,6-diethyl-4-methylphenyl)amino]anthraquinone; 1,4-Bis
104-76-7	2-Ethyl-1-hexanol
67-63-0	propan-2-ol
3734-33-6	denatonium benzoate
7732-18-5	water, distilled, conductivity or of similar purity

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 ethanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

109-99-9	tetrahydrofuran	SC
78-93-3	butanone	I

· **TLV (Threshold Limit Value established by ACGIH)**

109-99-9	tetrahydrofuran	A3
9002-86-2	polyvinyl chloride	A4
57583-34-3	2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-methyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate	A4
64-17-5	ethanol	A3
67-63-0	propan-2-ol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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Hazard pictograms



GHS02 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:

tetrahydrofuran
butanone

Hazard statements

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing vapours.
P281 Use personal protective equipment as required.
P370+P378 In case of fire: Use to extinguish: Water haze, Alcohol resistant foam, Fire-extinguishing powder, Carbon dioxide.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with national regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Bison QESH

Contact: Reach coordinator

Date of preparation / last revision 05/24/2019 / 22

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit

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REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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· * **Data compared to the previous version altered.**

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