

## Safety Data Sheet acc. to OSHA HCS

Printing date 05/07/2017

Reviewed on 05/07/2017

### 1 Identification

- . **Product identifier**
- . **Trade name:** GRIFFON UNI-100 TIN 5L\*1 L160
- . **Application of the substance / the mixture** Adhesives
- . **Details of the supplier of the safety data sheet**
- . **Manufacturer/Supplier:**  
1  
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

### 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.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory irritation.

- . **Label elements**

- . **GHS label elements**

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

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**Hazard pictograms**



GHS02 GHS05 GHS07 GHS08

**Signal word** Danger

**Hazard-determining components of labeling:**

tetrahydrofuran  
cyclohexanone

**Hazard statements**

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H351 Suspected of causing cancer.  
H335 May cause respiratory irritation.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P261 Avoid breathing vapours.  
P280 Wear eye protection / face protection.  
P281 Use personal protective equipment as required.  
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.  
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 = 1  
Fire = 3  
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:** Adhesive

**Dangerous components:**

109-99-9	tetrahydrofuran	50-100%
108-94-1	cyclohexanone	10-25%
78-93-3	methyl ethyl ketone	2.5-10%

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. **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

. **Description of first aid measures**

. **General information:** No special measures required.

. **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

Call a doctor immediately.

. **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

. **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

. **After swallowing:**

Do not induce vomiting; immediately call for medical help.

Rinse out mouth and then drink plenty of water.

. **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:** Mount respiratory protective device.

. **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:**

Prevent seepage into sewage system, workpits and cellars.

Do not allow to enter sewers/ surface or ground water.

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**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
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:**

9002-86-2	ethene, chloro-, homopolymer	3 mg/m3
78-93-3	methyl ethyl ketone	200 ppm
112945-52-5	fumed silica	18 mg/m3
9003-39-8	polyvinylpyrrolidon	51 mg/m3

**PAC-2:**

9002-86-2	ethene, chloro-, homopolymer	33 mg/m3
78-93-3	methyl ethyl ketone	2700* ppm
112945-52-5	fumed silica	100 mg/m3
9003-39-8	polyvinylpyrrolidon	560 mg/m3

**PAC-3:**

9002-86-2	ethene, chloro-, homopolymer	200 mg/m3
78-93-3	methyl ethyl ketone	4000* ppm
112945-52-5	fumed silica	630 mg/m3
9003-39-8	polyvinylpyrrolidon	20,000 mg/m3

**7 Handling and storage**

**Handling:**

**Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

**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.

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

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**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:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

**78-93-3 methyl ethyl ketone**

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

. **Ingredients with biological limit values:**

**109-99-9 tetrahydrofuran**

BEI	2 mg/L Medium: urine Time: end of shift Parameter: Tetrahydrofuran
-----	---

**78-93-3 methyl ethyl ketone**

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 skin.

Avoid contact with the eyes and skin.

. **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

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**Protection of hands:**

Protective gloves

PVC or PE gloves

Solvent resistant gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Not required.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

PVC or PE gloves

**For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

PVC or PE gloves

Neoprene gloves

**For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

PVC or PE gloves

**As protection from splashes gloves made of the following materials are suitable:**

PVC or PE gloves

**Eye protection:**

Tightly sealed goggles

**Body protection:**

Use protective suit.

Solvent resistant protective clothing

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### 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 °C (149 °F)

. Flash point: -14 °C (7 °F)

. Flammability (solid, gaseous): Not applicable.

. Ignition temperature: 230 °C (446 °F)

. Decomposition temperature: Not determined.

. Auto igniting: Product is not selfigniting.

. Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

##### . Explosion limits:

Lower:	1.3 Vol %
Upper:	12.0 Vol %

. Vapor pressure at 20 °C (68 °F): 200 hPa (150 mm Hg)

. Density at 20 °C (68 °F): 0.972 g/cm<sup>3</sup> (8.111 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):	1 mPas
Kinematic:	Not determined.

Organic solvents: 78.9 %

##### . Other information

All relevant physical data were determined for the mixture. All non determined data are not measurably or not relevant for the characterization of the mixture.

### 10 Stability and reactivity

. Reactivity No further relevant information available.

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

**11 Toxicological information**

- . **Information on toxicological effects**

- . **Acute toxicity:**

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

**109-99-9 tetrahydrofuran**

Oral	LD50	3000 mg/kg (rat)
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**108-94-1 cyclohexanone**

Oral	LD50	1900 mg/kg (rat)
------	------	------------------

Dermal	LD50	948 mg/kg (rbt)
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Inhalative	LC50/4 h	8000 mg/l (rat)
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**78-93-3 methyl ethyl ketone**

Oral	LD50	3300 mg/kg (rat)
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Dermal	LD50	5000 mg/kg (rbt)
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- . **Primary irritant effect:**

- . **on the skin:** Irritant to skin and mucous membranes.
- . **on the eye:** Strong irritant with the danger of severe eye injury.
- . **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)**

108-94-1	cyclohexanone	3
9002-86-2	ethene, chloro-, homopolymer	3
68648-82-8	Chlorinated polyvinyl chloride	3
9003-39-8	polyvinylpyrrolidon	3
64-17-5	ethanol	1

- . **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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### 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.
- . **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.
- . **Uncleaned packagings:**
- . **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

### 14 Transport information

- |                                     |   |
|-------------------------------------|---|
| . <b>UN-Number</b>                  |   |
| . <b>DOT, IMDG, IATA</b>            | UN1133  |
| . <b>UN proper shipping name</b>    |   |
| . <b>DOT</b>                        | Adhesives   |
| . <b>ADR/ADN</b>                    | 1133 Adhesives, special provision 640E  |
| . <b>IMDG, IATA</b>                 | ADHESIVES   |
| . <b>Transport hazard class(es)</b> |   |
| . <b>DOT</b>                        |   |
|                                     |  |
| . <b>Class</b>                      | 3 Flammable liquids   |
| . <b>Label</b>                      | 3   |

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. **Class** 3 (F1) Flammable liquids  
. **Label** 3

. **IMDG, IATA**



. **Class** 3 Flammable liquids  
. **Label** 3

. **Packing group**  
. **DOT, IMDG, IATA** III

. **Environmental hazards:**  
. **Marine pollutant:** No

. **Special precautions for user** Warning: Flammable liquids  
. **Danger code (Kemler):** 33  
. **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:**

. **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, SPECIAL PROVISION 640E, 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.

. **SARA Section 313 (specific toxic chemical listings)**

78-93-3 | methyl ethyl ketone

. **TSCA (Toxic Substances Control Act)**

9002-86-2 | ethene, chloro-, homopolymer

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78-93-3	methyl ethyl ketone
68648-82-8	Chlorinated polyvinyl chloride
11097-59-9	Magnesium aluminium hydroxide carbonate
9003-39-8	polyvinylpyrrolidon
7732-18-5	water, distilled, conductivity or of similarpurity

**. Prop 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

**. Cancerogenity categories**

**. EPA (Environmental Protection Agency)**

78-93-3	methyl ethyl ketone	I
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**. TLV (Threshold Limit Value established by ACGIH)**

109-99-9	tetrahydrofuran	A3
108-94-1	cyclohexanone	A3
9002-86-2	ethene, chloro-, homopolymer	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

**. MAK (German Maximum Workplace Concentration)**

109-99-9	tetrahydrofuran	4
108-94-1	cyclohexanone	3B
64-17-5	ethanol	5

**. 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).

**. Hazard pictograms**



GHS02 GHS05 GHS07 GHS08

**. Signal word** Danger

**. Hazard-determining components of labeling:**

tetrahydrofuran  
cyclohexanone

**. Hazard statements**

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H351 Suspected of causing cancer.  
H335 May cause respiratory irritation.

**. Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P261 Avoid breathing vapours.

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- P280 Wear eye protection / face protection.  
P281 Use personal protective equipment as required.  
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.  
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 coördinator
- . **Date of preparation / last revision** 05/07/2017 / 21
- . **Abbreviations and acronyms:**
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  - Carc. 2: Carcinogenicity – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- . \* **Data compared to the previous version altered.**

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