Safety Data Sheet
acc. to OSHA HCS

Printing date 07/16/2026 Reviewed on 07/16/2026

1 Identification

· **Product identifier**

· **Trade name:** GRF IMAL AE 300ML*12 L221
· **Application of the substance / the mixture** Penetrating oil

· **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:** PSRA
· **Emergency telephone number:**
Bison and Griffon products: +31 88 3235700. Operating hours mo-fr 08:00h-17:00h (CET)
UHU products: + 49 (0) 30/19240 (Notruf). Operating hours mo-fr 08:00h-17:00h (CET)

For detailed information contact the national Poison Centre @
https://poisoncentres.echa.europa.eu/appointed-bodies

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2 Hazard(s) identification

· **Classification of the substance or mixture**

Aerosols 1	H222 Extremely flammable aerosol.
Specific Target Organ Toxicity - Single Exposure 3	H336 May cause drowsiness or dizziness.
Aspiration Hazard 1	H304 May be fatal if swallowed and enters airways.

· **Label elements**
· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
1-methoxy-2-propanol
Hydrocarbons, C10, aromatics, <1% naphthalene
1,2,4-trimethylbenzene
· **Hazard statements**
H222 Extremely flammable aerosol.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.

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· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P271 Use only outdoors or in a well-ventilated area.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents/container in accordance with national regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 4
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 4
Reactivity = 3

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Penetrating oil

· **Dangerous components:**

	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	25-50%
107-98-2	1-methoxy-2-propanol	10-25%
106-97-8	n-Butan	10-25%
74-98-6	propane	10-25%
	Hydrocarbons, C10, aromatics, <1% naphthalene	2.5-10%
75-28-5	isobutane	2.5-10%
95-63-6	1,2,4-trimethylbenzene	<1%
95-38-5	2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	<1%

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.
· **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:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

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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:**
Dispose contaminated material as waste according to section 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:**		
107-98-2	1-methoxy-2-propanol	100 ppm
106-97-8	n-Butan	5500 ppm
74-98-6	propane	5500 ppm
75-28-5	isobutane	5500 ppm
95-63-6	1,2,4-trimethylbenzene	140 ppm
91-20-3	naphthalene	15 ppm

· **PAC-2:**		
107-98-2	1-methoxy-2-propanol	160 ppm
106-97-8	n-Butan	17000 ppm
74-98-6	propane	17000 ppm
75-28-5	isobutane	17000 ppm
95-63-6	1,2,4-trimethylbenzene	360 ppm

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91-20-3	naphthalene	83 ppm

· **PAC-3:**

107-98-2	1-methoxy-2-propanol	660 ppm
106-97-8	n-Butan	53000 ppm
74-98-6	propane	33000 ppm
75-28-5	isobutane	53000 ppm
95-63-6	1,2,4-trimethylbenzene	470 ppm
91-20-3	naphthalene	500 ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
· **Information about storage in one common storage facility:** Not required
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Storage class:** 2 B
· **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 section 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

107-98-2 1-methoxy-2-propanol	
REL	Short-term value: 540 mg/m³, 150 ppm Long-term value: 360 mg/m³, 100 ppm
TLV	Short-term value: 369 mg/m³, 100 ppm Long-term value: 184 mg/m³, 50 ppm A4
106-97-8 n-Butan	
REL	Long-term value: 1900 mg/m³, 800 ppm

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TLV	Short-term value: 2370 mg/m³, 1000 ppm (EX)
74-98-6 propane	
PEL	Long-term value: 1800 mg/m³, 1000 ppm
REL	Long-term value: 1800 mg/m³, 1000 ppm
TLV	see Appendix F Minimal oxygen content (D, EX)
75-28-5 isobutane	
TLV	Short-term value: 2370 mg/m³, 1000 ppm (EX)
95-63-6 1,2,4-trimethylbenzene	
REL	Long-term value: 125 mg/m³, 25 ppm
TLV	Long-term value: 10 ppm A4

· **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.
Wash hands before breaks and at the end of work.
· **Breathing equipment:**
Use suitable respiratory protective device in case of insufficient ventilation.
· **Recommended filter device for short term use:** Filter A
· **Protection of hands:**
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**
Recommended thickness of the material: > 0,12 mm
Nitrile rubber, NBR
· **Penetration time of glove material**
For the mixture of chemicals mentioned below the penetration time has to be at least 10 minutes (Permeation according to EN 374 Part 3: Level 1).
· **Eye protection:** Not required

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Aerosol
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined

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· **pH-value:**	Mixture is a gas.
· **Change in condition**	
Melting point/Melting range:	Undetermined
Boiling point/Boiling range:	-44.5 °C (-48.1 °F)
· **Flash point:**	-60 °C (-76 °F)
· **Flammability:**	Not applicable
· **Auto igniting:**	210 °C (410 °F)
· **Decomposition temperature:**	Not determined
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	0.5 Vol %
Upper:	~20 Vol %
· **Vapor pressure at 20 °C (68 °F):**	8300 hPa (6225.5 mm Hg)
· **Density at 20 °C (68 °F):**	~0.634 g/cm³ (~5.291 lbs/gal)
· **Relative density**	Not determined
· **Vapor density**	Not determined
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined
· **Viscosity:**	
Dynamic:	Not determined
Kinematic:	Not determined
· **Solvent content:**	
Organic solvents:	80.5 %
VOC content:	86.51 % ~548.5 g/l / ~4.58 lb/gal
Solids content:	0.2 %
· **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.

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· **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:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
107-98-2 1-methoxy-2-propanol		
Oral	LD50	4016 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Hydrocarbons, C10, aromatics, <1% naphthalene		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
95-63-6 1,2,4-trimethylbenzene		
Oral	LD50	5000 mg/kg (rat)
Inhalative	LC50/4 h	11 mg/l (rat)
95-38-5 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol		
Oral	LD50	1265 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
91-20-3	naphthalene	2B

· **NTP (National Toxicology Program)**		
91-20-3	naphthalene	R

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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· **Germ cell mutagenicity** Not applicable

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:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **Other adverse effects** No further relevant information available.

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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**	UN1950
· **UN proper shipping name**	
· **DOT**	Aerosols, flammable
· **ADR/ADN**	1950 AEROSOLS
· **IMDG**	AEROSOLS
· **IATA**	AEROSOLS, flammable

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· **Transport hazard class(es)**

· **DOT**



· **Class**	2.1 Gases
· **Label**	2.1

· **ADR/ADN**



· **Class**	2 5F Gases
· **Label**	2.1

· **IMDG, IATA**



· **Class**	2.1 Gases
· **Label**	2.1

· **Packing group**	
· **DOT, ADR/ADN, IMDG, IATA**	not regulated

· **Environmental hazards:**	
· **Marine pollutant:**	No

· **Special precautions for user**	Warning: Gases
· **Hazard identification number (Kemler code):**	-
· **EMS Number:**	F-D,S-U
· **Segregation groups**	(SGG18) Alkalis
· **Stowage Code**	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· **Segregation Code**	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of

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·	class 2.
· **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: 75 kg On cargo aircraft only: 150 kg
· **ADR/ADN**	
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **UN "Model Regulation":**	UN 1950 AEROSOLS, 2.1

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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):**

95-63-6	1,2,4-trimethylbenzene
91-20-3	naphthalene

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

	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	ACTIVE
107-98-2	1-methoxy-2-propanol	ACTIVE
106-97-8	n-Butan	ACTIVE
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic	ACTIVE
74-98-6	propane	ACTIVE
75-28-5	isobutane	ACTIVE
95-63-6	1,2,4-trimethylbenzene	ACTIVE
95-38-5	2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	ACTIVE
110-25-8	(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine	ACTIVE
91-20-3	naphthalene	ACTIVE
7782-42-5	Graphite	ACTIVE
1589-47-5	2-methoxypropanol	ACTIVE

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· **Hazardous Air Pollutants**

91-20-3	naphthalene

· **Proposition 65**

· **Chemicals known to cause cancer:**

91-20-3	naphthalene

· **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:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

95-63-6	1,2,4-trimethylbenzene	II
91-20-3	naphthalene	C, CBD

· **TLV (Threshold Limit Value)**

91-20-3	naphthalene	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).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics
1-methoxy-2-propanol
Hydrocarbons, C10, aromatics, <1% naphthalene
1,2,4-trimethylbenzene

· **Hazard statements**
H222 Extremely flammable aerosol.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P271 Use only outdoors or in a well-ventilated area.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

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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:** PSRA
· **Contact:** PSRA
· **Date of preparation / last revision** 07/16/2026 / 179
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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
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
REL: Recommended Exposure Limit
Aerosols 1: Aerosols – Category 1
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
Aspiration Hazard 1: Aspiration hazard – Category 1
· *** Data compared to the previous version altered.**

US