Safety Data Sheet
according to HPR, Schedule 1

Date of issue 07/14/2026 Version number 45 Revision: 07/14/2026

1 Identification

· **Product identifier**

· **Trade name:** GRF CLEANER TI 5L*1 L221
· **Other means of identification**
· **Application of the substance / the mixture**
Thinner, Diluent
Cleaning agent/ Cleaner

· **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

*
2 Hazard identification

· **Classification of the substance or mixture**

Flammable liquids – Category 2	H225 Highly flammable liquid and vapour.
Eye damage/irritation – Category 2A	H319 Causes serious eye irritation.
Reproductive Toxicity - Category 2	H361 Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure) – Category 3	H336 May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure) – Category 1	H372 Causes damage to the nervous system through prolonged or repeated exposure.
Aspiration hazard – Category 1	H304 May be fatal if swallowed and enters airways.

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



GHS02 GHS07 GHS08

· **Signal word** Danger

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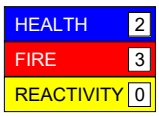
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· **Hazard-determining components of labeling:**
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane
n-hexane
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Ethyl acetate
· **Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.
H336 May cause drowsiness or dizziness.
H372 Causes damage to the nervous system through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapors.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with national regulations.
· **Information pertaining to particular dangers for man and environment:**
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 3
Reactivity = 0

3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Cleansing agent

· **Dangerous components:**		
	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	15-40% w/w *
141-78-6	Ethyl acetate	10-30% w/w *
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	10-30% w/w *
78-93-3	Butanone	10-30% w/w *
110-54-3	n-hexane	0.5-1.5% w/w *
110-82-7	cyclohexane	0.1-1% w/w *

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* Actual concentration ranges are withheld as a trade secret.

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4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **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.
· **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.
· **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 section 13.
Ensure adequate ventilation.

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· **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.

7 Handling and storage

· **Precautions for safe handling**
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

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

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8 Exposure controls/ Personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
141-78-6 Ethyl acetate	
EL	TWA: 150 ppm
EV	TWA: 1,440 mg/m³, 400 ppm
78-93-3 Butanone	
EL	STEL: 100 ppm TWA: 50 ppm R, Skin
EV	STEL: 885 mg/m³, 300 ppm TWA: 590 mg/m³, 200 ppm
110-54-3 n-hexane	
EL	TWA: 20 ppm Skin
EV	TWA: 176 mg/m³, 50 ppm
110-82-7 cyclohexane	
EL	TWA: 100 ppm
EV	TWA: 100 ppm

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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Additional information about design of technical systems:** No further data; see section 7.
· **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.
· **Breathing equipment:**
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


Protective 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**
Recommended thickness of the material: > 0,12 mm
Butyl rubber, BR
Nitrile rubber, NBR
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 10 minutes (Permeation according to EN 374 Part 3: Level 1).
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:**
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**	
· **Physical state**	Liquid
· **Color:**	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined
· **Melting point/Melting range:**	Undetermined
· **Boiling point/Boiling range:**	60 °C
· **Flammability:**	Highly flammable.
· **Explosion limits:**	
· **Lower:**	0.7 Vol %
· **Upper:**	11.5 Vol %
· **Flash point:**	-9 °C
· **Auto igniting:**	450 °C
· **Decomposition temperature:**	Not determined
· **pH-value:**	Not determined
· **Viscosity:**	
· **Kinematic:**	Not determined
· **Dynamic at 20 °C:**	5 mPas
· **Solubility in / Miscibility with**	
· **Water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined
· **Vapor pressure at 20 °C:**	105 hPa
· **Vapor pressure at 50 °C:**	360 hPa
· **Density at 20 °C:**	0.79 g/cm³
· **Relative density**	Not determined
· **Vapor density**	Not determined
· **Particle characteristics**	Not applicable

· **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.
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Solvent content:**	
· **Organic solvents:**	100.0 %
· **Solids content:**	0.0 %
· **Change in condition**	
· **Evaporation rate**	Not determined

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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.

11 Toxicological information

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

· **LD/LC50 values that are relevant for classification:**		
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane		
Oral	LD50	>3350 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	>20 mg/l (rat)
141-78-6 Ethyl acetate		
Oral	LD50	4934 mg/kg (rabbit)
Dermal	LD50	>20000 mg/kg (rabbit)
Inhalative	LC50/4 h	29.3 mg/l (rat)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		
Oral	LD50	>5840 mg/kg (rat)
Dermal	LD50	>2920 mg/kg (rat)
Inhalative	LC50/4 h	>23.3 mg/l (rat)
78-93-3 Butanone		
Oral	LD50	>2193 mg/kg (rat)
Dermal	LD50	>8050 mg/kg (rat)
110-54-3 n-hexane		
Oral	LD50	16000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	172 mg/l (rat)
110-82-7 cyclohexane		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4 h	32.88 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.

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· **Germ cell mutagenicity** Not applicable
· **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)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
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.
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **Other adverse effects**
· **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.

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/TDG, ADR, IMDG, IATA** UN1993

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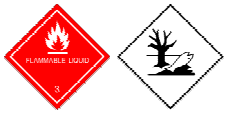
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· **UN proper shipping name**	
· **DOT/TDG**	Flammable liquids, n.o.s. (Naphtha (petroleum), hydrotreated light, Ethyl acetate)
· **ADR**	1993 Flammable liquids, n.o.s. (Naphtha (petroleum), hydrotreated light, Ethyl acetate), special provision 640D
· **IMDG**	FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrotreated light, ETHYL ACETATE), MARINE POLLUTANT
· **IATA**	FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrotreated light, ETHYL ACETATE)

· **Transport hazard class(es)**

· **DOT/TDG (Transport dangerous goods):**



· **Class**	3 Flammable liquids
· **Label**	3

· **ADR**



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

· **IMDG**



· **Class**	3 Flammable liquids
· **Label**	3

· **IATA**



· **Class**	3 Flammable liquids
· **Label**	3

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· **Packing group**	
· **DOT/TDG, ADR, IMDG, IATA**	II
· **Environmental hazards:**	Product contains environmentally hazardous substances: Naphtha (petroleum), hydrotreated light
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable
· **Transport/Additional information:**	
· **DOT/TDG**	
· **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· **Remarks:**	Special marking with the symbol (fish and tree).
· **ADR**	
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Remarks:**	For substances with class 3 according to IMDG-Code chapter 2.3.2.2 packing group is classified in packing group III, as viscosity is in accordance with requirements (flow time t > 100s).
· **Special precautions for user**	Warning: Flammable liquids
· **Hazard identification number (Kemler code):**	33
· **EMS Number:**	F-E,S-E
· **Stowage Category**	B
· **UN "Model Regulation":**	UN 1993 FLAMMABLE LIQUID, N.O.S. (NAPHTHA (PETROLEUM), HYDROTREATED LIGHT, ETHYL ACETATE), 3, II, ENVIRONMENTALLY HAZARDOUS

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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):**	
110-54-3	n-hexane
110-82-7	cyclohexane

· **TSCA (Toxic Substances Control Act):**		
141-78-6	Ethyl acetate	ACTIVE
78-93-3	Butanone	ACTIVE
110-54-3	n-hexane	ACTIVE
110-82-7	cyclohexane	ACTIVE

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**	
141-78-6	Ethyl acetate
78-93-3	Butanone
110-54-3	n-hexane
110-82-7	cyclohexane

· **Canadian Non-Domestic Substances List (NDSL)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**	
141-78-6	Ethyl acetate
78-93-3	Butanone
110-54-3	n-hexane

· **Per- and polyfluoroalkyl substances (PFAS)**
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, C6-C7, isoalkanes, cyclics, <5% n-hexane

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n-hexane
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Ethyl acetate

· **Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.
H336 May cause drowsiness or dizziness.
H372 Causes damage to the nervous system through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapors.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
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:** PSRA
· **Contact:** PSRA
· **Date of previous version** 01/20/2022
· **Version number of previous version:** 44
· **Date of preparation** 07/14/2026
· **Abbreviations and acronyms:**
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
· *** Data compared to the previous version altered.**

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