Safety Data Sheet
according to HPR, Schedule 1

Date of issue 07/13/2026 Version number 33 Revision: 07/13/2026

1 Identification

· **Product identifier**

· **Trade name:** GRF PU ADHESIVE FIBER BO 750G*6 L221
· **Other means of identification**
· **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:** 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 identification

· **Classification of the substance or mixture**

Acute Toxicity (Inhalation) - Category 4	H332 Harmful if inhaled.
Skin Irritation - Category 2	H315 Causes skin irritation.
Eye damage/irritation – Category 2A	H319 Causes serious eye irritation.
Sensitization - respiratory – Category 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Sensitization - skin – Category 1	H317 May cause an allergic skin reaction.
Carcinogenicity – Category 2	H351 Suspected of causing cancer.
Specific target organ toxicity (single exposure) – Category 3	H335 May cause respiratory irritation.
Specific target organ toxicity (repeated exposure) – Category 2	H373 May cause damage to organs through prolonged or repeated exposure.

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



GHS07 GHS08

· **Signal word** Danger

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· **Hazard-determining components of labeling:**
4,4'-methylene diphenyl diisocyanate, oligomers
1,2-Ethanediamine, polymer with 1,1'-methylenebis[4-isocyanatobenzene], 2-methyloxirane and oxirane
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha -hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)
· **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P260 Do not breathe vapors.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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 = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *2
Fire = 0
Reactivity = 0

3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Adhesive

· **Dangerous components:**		
25686-28-6	4,4'-methylene diphenyl diisocyanate, oligomers	15-40% w/w *
60551-33-9	1,2-Ethanediamine, polymer with 1,1'-methylenebis[4-isocyanatobenzene], 2-methyloxirane and oxirane	15-40% w/w *
9048-57-1	4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha -hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)	15-40% 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 and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **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:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
· **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.
· **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.

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7 Handling and storage

· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Storage class:** 12
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **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 and skin.
· **Breathing equipment:** Not required
· **Protection of hands:**



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
Nitrile rubber, NBR

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· **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:**



Tightly sealed goggles

Goggles recommended during refilling.
· **Body protection:** Use protective suit.

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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:**	<0 °C
· **Boiling point/Boiling range:**	Undetermined
· **Flammability:**	Not applicable
· **Explosion limits:**	
· **Lower:**	Not determined
· **Upper:**	Not determined
· **Flash point:**	Not applicable
· **Auto igniting:**	400 °C
· **Decomposition temperature:**	Not determined
· **pH-value:**	Not determined
· **Viscosity:**	
· **Kinematic:**	Not determined
· **Dynamic at 20 °C:**	15000 mPas
· **Solubility in / Miscibility with**	
· **Water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined
· **Vapor pressure:**	Not determined
· **Vapor pressure:**	
· **Density at 20 °C:**	1.132 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

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· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Solvent content:**	
· **Solids content:**	60.8 %
· **Change in condition**	
· **Evaporation rate**	Not determined

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:**		
25686-28-6 4,4'-methylene diphenyl diisocyanate, oligomers		
Oral	LD50	5000 mg/kg (rat)
9048-57-1 4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)		
Oral	LD50	>10000 mg/kg (rat)
Dermal	LD50	>9400 mg/kg (rabbit)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Germ cell mutagenicity** Not applicable
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

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· **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 undiluted product or large quantities of it to reach ground water, water course or sewage system.

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**	not regulated
· **ADR, IMDG, IATA**	not regulated
	-
· **UN proper shipping name**	
· **DOT/TDG, ADR, IMDG, IATA**	not regulated

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· **Transport hazard class(es)**	
· **DOT/TDG, ADR, ADN, IMDG, IATA** · **Class**	not regulated
· **Packing group** · **DOT/TDG, ADR, IMDG, IATA**	not regulated
· **Environmental hazards:** · **Marine pollutant:**	No
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **Special precautions for user**	Not applicable
· **UN "Model Regulation":**	not regulated

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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):**
None of the ingredients is listed.

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

9048-57-1	4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha -hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)	ACTIVE
68611-44-9	Silane, dichlorodimethyl-, reaction products with silica	ACTIVE
6425-39-4	2,2'-dimorpholinyldiethyl ether	ACTIVE

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

9048-57-1	4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha -hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)
68611-44-9	Silane, dichlorodimethyl-, reaction products with silica
6425-39-4	2,2'-dimorpholinyldiethyl ether

· **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.

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· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **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**



GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
4,4'-methylene diphenyl diisocyanate, oligomers
1,2-Ethanediamine, polymer with 1,1'-methylenebis[4-isocyanatobenzene], 2-methyloxirane and oxirane
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha -hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)

· **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P260 Do not breathe vapors.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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** 06/02/2021
· **Version number of previous version:** 32
· **Date of preparation** 07/13/2026

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· **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.**

CA