



Page 1 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture:

Adhesive sealant
Sector of use [SU]:
SU 0 - Other
SU 1 - Agriculture, forestry, fishery
SU19 - Building and construction work
SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Chemical product category [PC]:
PC 1 - Adhesives, sealants
Process category [PROC]:
PROC19 - Hand-mixing with intimate contact and only PPE available

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet



BTI Befestigungstechnik GmbH & Co. KG, Salzstr. 51, 74653 Ingelfingen, Germany
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Stefan.Haug@bti.de, www.bti.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (BRC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H335-May cause respiratory irritation.
Skin Irrit.	2	H315-Causes skin irritation.

Page 2 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

Resp. Sens.	1	H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens.	1	H317-May cause an allergic skin reaction.
STOT RE	2	H373-May cause damage to organs through prolonged or repeated exposure.
Carc.	2	H351-Suspected of causing cancer.
Aerosol	1	H222-Extremely flammable aerosol.
Aerosol	1	H229-Pressurised container: May burst if heated.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H319-Causes serious eye irritation. H335-May cause respiratory irritation. H315-Causes skin irritation. H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317-May cause an allergic skin reaction. H373-May cause damage to organs through prolonged or repeated exposure. H351-Suspected of causing cancer. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

P201-Obtain special instructions before use. P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211-Do not spray on an open flame or other ignition source. P251-Do not pierce or burn, even after use. P260-Do not breathe vapours or spray. P280-Wear protective gloves/protective clothing and eye protection/face protection. P284-Wear respiratory protection.

P304+P340-IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313-IF exposed or concerned: Get medical advice/attention.

P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

EUH204-Contains isocyanates. May produce an allergic reaction.

Without adequate ventilation, formation of explosive mixtures may be possible.
Diphenylmethanediisocyanate, isomers and homologues

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

When using:

development of explosive vapour/air mixture possible.

Danger of bursting (explosion) when heated

SECTION 3: Composition/information on ingredients



Page 3 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622

PU-foam

3.1 Substance

n.a.

3.2 Mixture

Diphenylmethanediisocyanate, isomeres and homologues	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	-
CAS	9016-87-9
content %	10-25
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT RE 2, H373

Tris(2-chlorisopropyl)phosphate	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	237-158-7
CAS	13674-84-5
content %	10-25
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302

Dimethyl ether	Substance for which an EU exposure limit value applies.
Registration number (REACH)	--
Index	603-019-00-8
EINECS, ELINCS, NLP	204-065-8
CAS	115-10-6
content %	2,5-15
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Gas 1, H220

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1/3.2 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation

Remove person from danger area.



Page 4 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

Supply person with fresh air and consult doctor according to symptoms.
Keep Data Sheet available.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

Ingestion

Call doctor immediately - have Data Sheet available.

Do not induce vomiting.

Never pour anything into the mouth of an unconscious person!

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur:

In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms.

Coughing

Irritation of the respiratory tract

Irritant to mucosa of the nose and throat

Respiratory distress

Oedema of the lungs

Dizziness

Headaches

Drying of the skin.

Dermatitis (skin inflammation)

Do not attempt to force glued areas of skin apart.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Extinction powder

CO₂

Water jet spray

Large fire:

Alcohol resistant foam

Water jet spray

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Toxic gases

Oxides of carbon

Oxides of nitrogen

Hydrocyanic acid (hydrogen cyanide)

Hydrogen chloride

Danger of explosion by prolonged heating.



Page 5 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

Explosive vapour/air mixture

5.3 Advice for firefighters

Protective respirator with independent air supply.

In case of fire and/or explosion do not breathe fumes.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient ventilation.

Avoid inhalation, and contact with eyes or skin.

Remove possible causes of ignition - do not smoke.

6.2 Environmental precautions

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up

If spray or gas escapes, ensure ample fresh air is available.

Active substance:

Allow product to harden.

Pick up mechanically and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure sufficient ventilation.

Do not use the product in enclosed spaces.

Room ventilation also at ground level.

Keep away from sources of ignition - Do not smoke.

Do not use on hot surfaces.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

No contact with products of this type in case of allergies, asthma und chronic respiratory tract disorders.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.

Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

Observe special regulations for aerosols!

Ⓒ

Page 6 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622

Use resistant floors, if necessary designed as collection pan.
 Keep protected from direct sunlight and temperatures over 50°C.
 Store in a well ventilated place.
 Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").
 Do not store over 23°C.
7.3 Specific end use(s)
 No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ⓒ	Chemical Name	Diphenylmethanediisocyanate, isomeres and homologues	Content %: 10-25
	WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
	Monitoring procedures: ---		
	BMGV: 1 µmol urinary diamine/mol creatinine in urine (Isocyanate, post task)	Other information: Sen (Isocyanates, all (as -NCO))	
Ⓒ	Chemical Name	Dimethyl ether	Content %: 2,5-15
	WEL-TWA: 400 ppm (766 mg/m3) (WEL), 1000 ppm (1920 mg/m3) (EU)	WEL-STEL: 500 ppm (958 mg/m3) (WEL)	---
	Monitoring procedures: - Compur - KITA-123 S (549 129)		
	BMGV: ---	Other information: ---	
Ⓒ	Chemical Name	Isobutane	Content %:
	WEL-TWA: 1000 ppm (ACGIH)	WEL-STEL: ---	---
	Monitoring procedures: - Compur - KITA-113 SB(C) (549 368)		
	BMGV: ---	Other information: ---	
Ⓒ	Chemical Name	Propane	Content %:
	WEL-TWA: 1000 ppm (ACGIH)	WEL-STEL: ---	---
	Monitoring procedures: - Compur - KITA-125 SA (549 954)		
	BMGV: ---	Other information: ---	

Ⓒ WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Dimethyl ether						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note



Page 7 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622

Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1894	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	471	mg/m ³	
	Environment - freshwater		PNEC	0,155	mg/l	
	Environment - sediment, freshwater		PNEC	0,681	mg/kg	
	Environment - soil		PNEC	0,045	mg/kg	
	Environment - sewage treatment plant		PNEC	160	mg/l	
	Environment - marine		PNEC	0,016	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,549	mg/l	
	Environment - sediment, marine		PNEC	0,069	mg/kg	

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Safety gloves made of butyl (EN 374)

Minimum layer thickness in mm:

0,5

Permeation time (penetration time) in minutes:

> 480

The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

Respiratory protection:



Page 8 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

Ensure sufficient ventilation.
If OES or MEL is exceeded.
Filter A (EN 14387), code colour brown
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Aerosol, Substance: Liquid
Colour:	According to specification
Odour:	Slightly
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	n.a.
Initial boiling point and boiling range:	n.a.
Flash point:	n.a.
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	1,5 Vol-%
Upper explosive limit:	18,6 Vol-%
Vapour pressure:	5,5-6 bar (20°C)
Vapour density (air = 1):	Not determined
Density:	Not determined
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	No
Auto-ignition temperature:	>230 °C (Ignition temperature)



Page 9 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622

Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.
Oxidising properties:	No
9.2 Other information	
Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

See also Subsection 10.2 to 10.6.
 The product has not been tested.

10.2 Chemical stability

See also Subsection 10.1 to 10.6.
 Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

See also Subsection 10.1 to 10.6.
 No decomposition if used as intended.

10.4 Conditions to avoid

See also section 7.
 Heating, open flame, ignition sources
 Pressure increase will result in danger of bursting.
 Decomposition:

>= 300°C

10.5 Incompatible materials

See also section 7.
 Avoid contact with strong alkalis.
 Avoid contact with strong acids.

10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.
 See also section 5.2
 No decomposition when used as directed.

SECTION 11: Toxicological information

Possibly more information on health effects, see Section 2.1 (classification).

PU GUN FOAM 4W VARIO B2 750 ML Art.: 9002622						
Toxicity / effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value



Page 10 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 03.07.2015 / 0007

Replaces revision of / Version: 24.01.2014 / 0006

Valid from: 03.07.2015

PDF print date: 03.07.2015

PU GUN FOAM 4W VARIO B2 750 ML

Art.: 9002622

Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:	ATE	>5	mg/l/4 h			calculated value, Aerosol
Acute toxicity, by inhalation:	ATE	>20	mg/l/4 h			calculated value, Vapours
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

Diphenylmethanediisocyanate, isomeres and homologues						
Toxicity / effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>10000	mg/kg	Rat		
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>10000	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	0,31	mg/l/4 h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Skin corrosion/irritation:						Irritant

Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Mild irritant
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:						Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Slightly irritant, Analogous conclusion
Respiratory or skin sensitisation:						Sensitising (inhalation and skin contact)
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Reproductive toxicity:						Negative
Reproductive toxicity (Developmental toxicity):	NOA EL	12		Rat	OECD 414 (Prenatal Developmental Toxicity Study)	
Reproductive toxicity (Effects on fertility):					OECD 414 (Prenatal Developmental Toxicity Study)	No indications of such an effect.
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract
Aspiration hazard:						No



Page 12 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622

Symptoms:						fever, coughing, headaches, nausea and vomiting., dizziness, breathing difficulties, laryngeal oedema, oedema of the lungs, chemical pneumonitis (condition similar to pneumonia), abdominal pain, diarrhoea
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Tris(2-chlorisopropyl)phosphate						
Toxicity / effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1150-1750	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	>5	mg/l	Rat		
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Germ cell mutagenicity:					(Ames-Test)	Negative
Reproductive toxicity:				Rat		Negative
Symptoms:						respiratory distress, loss of hair, cramps, watering eyes

Dimethyl ether						
Toxicity / effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	164	mg/l/4 h	Rat		
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative

®

Page 13 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 03.07.2015 / 0007

Replaces revision of / Version: 24.01.2014 / 0006

Valid from: 03.07.2015

PDF print date: 03.07.2015

PU GUN FOAM 4W VARIO B2 750 ML

Art.: 9002622

Germ cell mutagenicity:					OECD 477 (Genetic Toxicology - Sex-Linked Recessive Lethal Test in Drosophila melanogaster)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOA EC	47106		Rat	OECD 452 (Chronic Toxicity Studies)	Negative(2 a)
Symptoms:						unconsciousness, headaches, mucous membrane irritation, dizziness, nausea and vomiting.

Isobutane						
Toxicity / effect	Endp oint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4 h	Rat		
Serious eye damage/irritation:				Rabbit		Not irritant
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						unconsciousness, frostbite, headaches, cramps, dizziness, nausea and vomiting.

Propane						
Toxicity / effect	Endp oint	Value	Unit	Organism	Test method	Notes
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative



Page 14 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622

Symptoms:							breathing difficulties, unconsciousness, frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting.
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SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

PU GUN FOAM 4W VARIO B2 750 ML Art.: 9002622							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							Rapid photochemical oxidation in the air.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.

Diphenylmethanediisocyanate, isomeres and homologues							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC0	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	EC50	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	EC50	72h	>1640	mg/l		IUCLID Chem. Data Sheet (ESIS)	

Toxicity to algae:	NOEC/ NOEL	72h	1640	mg/l		OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradabi- lity - Modified MITI Test (II))	Not biodegradable
Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:	BOD	28d	<10	%		OECD 302 C (Inherent Biodegradabi- lity - Modified MITI Test (II))	

Tris(2-chlorisopropyl)phosphate							
Toxicity / effect	Endpoi- nt	Time	Valu- e	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	56,2	mg/l	Brachydanio rerio		
Toxicity to fish:	LC50	96h	98	mg/l	Pimephales promelas		
Toxicity to daphnia:	LC50	48h	65- 335	mg/l			
Toxicity to algae:	NOEC/ NOEL	96h	6	mg/l	Selenastrum capricornutum		
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:	BCF		0,8- 4,6		Cyprinus caprio		
Bioaccumulative potential:	Log Pow		2,59				

Dimethyl ether



Page 16 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revised on / Version: 03.07.2015 / 0007

Replaces revision of / Version: 24.01.2014 / 0006

Valid from: 03.07.2015

PDF print date: 03.07.2015

PU GUN FOAM 4W VARIO B2 750 ML

Art.: 9002622

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	>4000	mg/l	Poecilia reticulata		
Toxicity to fish:	LC50	96h	2695	mg/l	Pimephales promelas		
Toxicity to fish:	LC50	96h	3082	mg/l	Salmo gairdneri		
Toxicity to daphnia:	EC50	48h	>4000	mg/l	Daphnia magna		
Toxicity to algae:	EC0	96h	154,9	mg/l	Chlorella vulgaris	QSAR	
Persistence and degradability:		28d	5	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Not readily biodegradable
Bioaccumulative potential:	Log Pow		-0,07				Bioaccumulation is unlikely (LogPow < 1). 25°C (pH 7)
Mobility in soil:	H (Henry)		518,6	Pa*m ³ /mol			No adsorption in soil.
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10		>1600	mg/l	Pseudomonas putida		
Water solubility:			45,60	mg/l			25°C

Propane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Bioaccumulative potential:	Log Pow		2,28				A notable biological accumulation potential is not to be expected (LogPow 1-3).
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.




Page 17 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revised on / Version: 03.07.2015 / 0007
 Replaces revision of / Version: 24.01.2014 / 0006
 Valid from: 03.07.2015
 PDF print date: 03.07.2015
 PU GUN FOAM 4W VARIO B2 750 ML
 Art.: 9002622


Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
 08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances
 16 05 04 gases in pressure containers (including halons) containing hazardous substances
 Sewage disposal shall be discouraged.
 Pay attention to local and national official regulations.
 E.g. dispose at suitable refuse site.
 E.g. suitable incineration plant.
For contaminated packing material
 Pay attention to local and national official regulations.
 Do not perforate, cut up or weld uncleaned container.
 Residues may present a risk of explosion.
 15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements

UN number:	1950	
Transport by road/by rail (ADR/RID)		
UN proper shipping name:		
UN 1950 AEROSOLS		
Transport hazard class(es):	2.1	
Packing group:	-	
Classification code:	5F	
LQ (ADR 2015):	1 L	
Environmental hazards:	Not applicable	
Tunnel restriction code:	D	

Transport by sea (IMDG-code)

UN proper shipping name:		
AEROSOLS		
Transport hazard class(es):	2.1	
Packing group:	-	
EmS:	F-D, S-U	
Marine Pollutant:	n.a	
Environmental hazards:	Not applicable	

Transport by air (IATA)

UN proper shipping name:		
Aerosols, flammable		
Transport hazard class(es):	2.1	
Packing group:	-	
Environmental hazards:	Not applicable	

Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.
 Minimum amount regulations have not been taken into account.
 Danger code and packing code on request.
 Comply with special provisions.



Page 18 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

For classification and labelling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Observe law on protection of expectant mothers (German regulation).

Regulation (EC) No 1907/2006, Annex XVII

Diphenylmethanediisocyanate, isomeres and homologues

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1 - 16

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Employee training in handling dangerous goods is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Irrit. 2, H319	Classification according to calculation procedure.
STOT SE 3, H335	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Resp. Sens. 1, H334	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
STOT RE 2, H373	Classification according to calculation procedure.
Carc. 2, H351	Classification according to calculation procedure.
Aerosol 1, H222	Classification based on test data.
Aerosol 1, H229	Classification based on test data.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H220 Extremely flammable gas.



Page 19 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

Eye Irrit. — Eye irritation
STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
Skin Irrit. — Skin irritation
Resp. Sens. — Respiratory sensitization
Skin Sens. — Skin sensitization
STOT RE — Specific target organ toxicity - repeated exposure
Carc. — Carcinogenicity
Aerosol — Aerosols
Acute Tox. — Acute toxicity - inhalation
Acute Tox. — Acute toxicity - oral
Flam. Gas — Flammable gases (including chemically unstable gases)

Any abbreviations and acronyms used in this document:

AC Article Categories
acc., acc. to according, according to
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environmental Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration



Page 20 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEA European Economic Area

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ERC Environmental Release Categories

ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWPHalocarbon Global Warming Potential

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill

LCLo lowest published lethal concentration

LD Lethal Dose of a chemical

LD50 Lethal Dose, 50% kill

LDLo Lethal Dose Low

LOAEL Lowest Observed Adverse Effect Level

LOEC Lowest Observed Effect Concentration

LOEL Lowest Observed Effect Level

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicable

n.av. not available

n.c. not checked

n.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level

NOEC No Observed Effect Concentration

NOEL No Observed Effect Level



Page 21 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 03.07.2015 / 0007
Replaces revision of / Version: 24.01.2014 / 0006
Valid from: 03.07.2015
PDF print date: 03.07.2015
PU GUN FOAM 4W VARIO B2 750 ML
Art.: 9002622

ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.