

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 03.10.2011





Version number 39

Revision: 03.10.2011

**1 Identification of the substance/mixture and of the company/undertaking**

- **Product identifier**
- **Trade name: GUN PU foam Winter 750ml  
STD PU foam Winter 750ml**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation**  
Assembly foam  
Construction chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
FinSelena Oy  
Selenantie 3, 16900 Lammi  
tel. +358 3 6121 401, fax + 358 3 6121 403  
email: info@finselena.com, http://www.finselena.com
- **Further information obtainable from:** info@finselena.com
- **Emergency telephone number:**  
tel. +358 3 6121 401  
Myrkytystietokeskus 09-471 977

**2 Hazards identification**

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  -  Xn; Harmful  
R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  -  Xn; Irritant  
R42/43: May cause sensitisation by inhalation and skin contact.
  -  Xi; Irritant  
R36/37/38: Irritating to eyes, respiratory system and skin.
  -  F+; Extremely flammable  
R12: Extremely flammable.  
R53: May cause long-term adverse effects in the aquatic environment.
- **Information concerning particular hazards for human and environment:**  
Combustible gas, more heavy from air; can crowd at surfaces and in lower parties of rooms. Foam is easily to glue to the skin and other surfaces.  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
Warning! Pressurized container.
- **Classification system:**  
The classification is in line with current EC lists. It is extended, by information from technical literature and company information.  
Classification of the preparation with attributed R53 phrase, taking into account the content of C14-C17 chlorinated alkanes, was made on the basis of acute toxicology tests performed on daphnia *Daphnia magna* and algae report BMG study no. A10-00856 and BMG study no. A10-00857

(Contd. on page 2)

# Safety data sheet

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(Contd. of page 1)

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Xn Harmful  
F+ Extremely flammable

- **Hazard-determining components of labelling:**

polymethylene polyphenyl polyisocyanate, isomers and homologues

- **Risk phrases:**

20 Harmful by inhalation.  
 36/37/38 Irritating to eyes, respiratory system and skin.  
 40 Limited evidence of a carcinogenic effect.  
 42/43 May cause sensitisation by inhalation and skin contact.  
 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 53 May cause long-term adverse effects in the aquatic environment.  
 12 Extremely flammable.

- **Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).  
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
 51 Use only in well-ventilated areas.  
 61 Avoid release to the environment. Refer to special instructions/safety data sheets.  
 63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.

- **Special labelling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer  
 May cause harm to breastfed babies.  
 Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.  
 -Persons already sensitised to diisocyanates may develop allergic reactions when using this product.  
 -Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.  
 -This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.  
 Keep away from sources of ignition - No smoking.  
 Do not spray on a naked flame or incandescent material.  
 Keep out of the reach of children.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture: consisting of the following components.

- **Dangerous components:**

CAS: 9016-87-9	polymethylene polyphenyl polyisocyanate, isomers and homologues Xn R20-40-48/20; Xn R42/43; Xi R36/37/38 Carc. Cat. 3	30.0 - 60.0%
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate Xn R22	< 25.0%

(Contd. on page 3)

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(Contd. of page 2)

CAS: 85535-85-9 EINECS: 287-477-0	alkanes, C14-17, chloro  N R50/53 R64-66	< 20.0%
CAS: 74-98-6 EINECS: 200-827-9	propane  F+ R12	< 15.0%
CAS: 106-97-8 EINECS: 203-448-7	butane  F+ R12	< 15.0%
CAS: 75-28-5 EINECS: 200-857-2	isobutane  F+ R12	< 15.0%
CAS: 115-10-6 EINECS: 204-065-8	dimethyl ether  F+ R12	< 10.0%

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

### 4 First aid measures

• **Description of first aid measures**

• **After inhalation:**

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

• **After skin contact:**

Remove uncured foam using a piece of cloth and an unaggressive solvent, e.g. ethanol. Wash your hands and the cleaned skin surface using soapy water. Cured foam can be removed mechanically with the use of a brush, soap and plenty of water. Use protective cream after skin surface has been cleaned.

• **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

• **After swallowing:**

Do not induce vomiting; call for medical help immediately.

Rinse out mouth and then drink plenty of water.

• **Information for doctor:**

• **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

• **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Firefighting measures

• **Extinguishing media**

• **Suitable extinguishing agents:**

Carbon dioxide

Fire-extinguishing powder

Foam

Water spray

Use fire extinguishing methods suitable to surrounding conditions.

• **Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire.

• **Advice for firefighters**

• **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

• **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

• **Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources.

Wear protective clothing.

Do not breathe gas/fumes/vapour/spray.

Ensure adequate ventilation

(Contd. on page 4)

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## according to 1907/2006/EC, Article 31

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Version number 39

Revision: 03.10.2011

**Trade name: GUN PU foam Winter 750ml**  
**STD PU foam Winter 750ml**

(Contd. of page 3)

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
 Uncured foam adheres easily, hence it should be removed with caution. Remove instantly using a piece of cloth and solvents , e.g. acetone, alcohol. Remove cured foam mechanically.  
 Dispose contaminated material as waste according to item 13.  
 Ensure adequate ventilation.
- **Reference to other sections** See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
 Do not activate the foam if the can temp. is above 25°C. The can should be emptied within 5 minutes after activation (risk of explosion).  
 Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
 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.  
 Do not spray onto a naked flame or any incandescent material.  
 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.  
 Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:**  
 Do not store together with acids.  
 Do not store together with alkalis (caustic solutions).  
 Store away from reducing agents.  
 Store away from oxidizing agents.  
 Store away from foodstuffs.
- **Further information about storage conditions:**  
 Store in vertical position in closed original containers.  
 Store at temperature from + 5°C to + 30°C.  
 Protect from frost.  
 Store under lock and key and out of the reach of children.  
 Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**9016-87-9 polymethylene polyphenyl polyisocyanate, isomers and homologues**

WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
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**106-97-8 butane**

WEL	Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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**115-10-6 dimethyl ether**

WEL	Short-term value: 958 mg/m <sup>3</sup> , 500 ppm Long-term value: 766 mg/m <sup>3</sup> , 400 ppm
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(Contd. on page 5)

# Safety data sheet

## according to 1907/2006/EC, Article 31

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Version number 39

Revision: 03.10.2011

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**STD PU foam Winter 750ml**

(Contd. of page 4)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes and skin.  
 Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
 PVC gloves  
 Rubber gloves  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

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

<b>Form:</b>	Rapidly curing foam dispensed by gaseous propellant from an aerosol container.
<b>Colour:</b>	Light yellow
<b>Odour:</b>	Characteristic
- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Not applicable, as aerosol.
- **Flash point:** < 0 °C
- **Danger of explosion:** Heating may cause an explosion.
- **Explosion limits:**

<b>Lower:</b>	1.5 Vol %
<b>Upper:</b>	11.0 Vol %
- **Vapour pressure:**

	>500 kPa (in the container)
	< 1*10 <sup>-5</sup> mmHg w 25°C (MDI)
- **Density at 20 °C:** ≤ 1.3 (PMDI) g/cm<sup>3</sup>

(Contd. on page 6)

GB

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Version number 39

Revision: 03.10.2011

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(Contd. of page 5)

- **Solubility in / Miscibility with water:** Insoluble.  
reacts with water
- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**  
Strongly reacts with water and other substances containing an active hydrogen atom
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

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

- **LD/LC50 values relevant for classification:**

#### 13674-84-5 tris(2-chlorisopropyl)-phosphate

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
Inhalative	LC50/4 h	> 0.05 mg/l (rat)

#### 101-68-8 4,4'-methylenediphenyl diisocyanate

Oral	LD50	9200 mg/kg (rat)
Inhalative	LC50/4 h	178 mg/l (rat)

- **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.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Irritant

### 12 Ecological information

- **Toxicity**

- **Acquatic toxicity:**

#### 13674-84-5 tris(2-chlorisopropyl)-phosphate

EC50	47 mg/kg (algae)
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#### 85535-85-9 alkanes, C14-17, chloro

EC50	> 1000mg/l/48h (daphnia) (20%MCCP's)
	>1000mg/l/72h (algae) (20%MCCP's)
NOEC	>1000 mg/l (algae) (20%MCCP's)

- **Persistence and degradability** Not biodegradable

(Contd. on page 7)

# Safety data sheet

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(Contd. of page 6)

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Does not accumulate in organisms
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

07 02 08*	other still bottoms and reaction residues
07 02 13	waste plastic
15 01 05	composite packaging

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
- **ADR, IMDG, IATA** 1950
- **UN proper shipping name**
- **IMDG, IATA** AEROSOLS
- **Transport hazard class(es)**
- **ADR**
- **Class** 2 5F Gases.
- **Label** 2.1
- **IMDG, IATA**
- **Class** 2 5F Gases.
- **Label** 2.1
- **Packing group**
- **ADR, IMDG** Void
- **Environmental hazards:**
- **Marine pollutant:** Yes
- **Special precautions for user** Warning: Gases.
- **Danger code (Kemler):** -
- **EMS Number:** F-D,S-U
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

(Contd. on page 8)

GB

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(Contd. of page 7)

· **Transport/Additional information:**

· **ADR**

· **Remarks:**

Exemption from ADR provisions by LQ principal (rule 3.4.5)  
 - Inner packaging, max. 1 liter in capacity; outer packaging  
 – max. gross weight of 30kg  
 - Inner packaging, max. 1 liter in capacity, based on  
 common ground and covered with shrink film – max. gross  
 weight of 20kg.

### 15 Regulatory information

- **Chemical safety assessment:** A Chemical Safety Assessment has 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.

· **Relevant phrases**

- R12 Extremely flammable.  
 R20 Harmful by inhalation.  
 R22 Harmful if swallowed.  
 R36/37/38 Irritating to eyes, respiratory system and skin.  
 R40 Limited evidence of a carcinogenic effect.  
 R42/43 May cause sensitisation by inhalation and skin contact.  
 R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R64 May cause harm to breastfed babies.  
 R66 Repeated exposure may cause skin dryness or cracking.

· **Recommended restriction of use**

Sealing and mounting of construction elements.

Mounting of doors or windows cannot be performed without the use of mechanical connectors. Before use, naturally bring the can up to room temperature. Shake well the container. Screw the straw on or screw can onto the gun valve. Working position is the "bottom up". Control the spray volume adjusting the pressing force applied on the feeding nozzle or gun handle. After release from container the foam increases its volume. Use special cleaner to remove excess of uncured foam (cured foam can be removed mechanically only). After full cure protect the foam against UV radiation. Under lower temperatures the foam extends and hardens slower. The information stated above is based on current knowledge and applies to the product in the form in which it is used. Data concerning this product is presented in order to fulfill safety requirements and not to guarantee its specific properties

In cases when application conditions are not subject to manufacturer's control, the responsibility for safe product use and obeying law regulations in particular, lies on the user's side.

Information in the appropriate technical data sheet of product.

- **Department issuing MSDS:** Product safety department.

· **\* Data compared to the previous version altered.**

- 1) So far unclassified substance CAS: 13674-84-5 added in pt 3; MDI reclassification
- 2) Change in classification of compound in pt 2
- 3) Change in storage temperature in pt 7
- 4) Pts 11 & 12 enhanced by data for new substances
- 5) information about collection of empty containers in 13 pt have been removed.
- 6) Change in pt 15 resulting from compound reclassification

Update date: 07.05.2010