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## Safety data sheet According to 1907/2006 / EC, Article

31

Release date: 04/09/2018





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Trade name: Fire-retardant polyurethane foam Piro Foam PF240

· Hazard pictograms

GHS07 GHS02 GHS08



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 Signal wordDanger · Hazard-determining components of labeling: Diphenylmethane diisocyanate, isomers and homologues Hazard statements H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated. H332 Harmful in the following inhalation. H315 Works drcorrosive to the skin. H319 Works drdevastating to the eyes. H334 **Mo**that cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 **Mothat** cause an allergic skin reaction. H351 Suspectede that it causes cancer. H335 Mothat cause respiratory irritation. H373 Mothat cause damage to organs through prolonged or repeated exposure. Precautionary statements P102 It protects in front of children. P260 He doesn't inhaledust / fume / gas / mist / vapors / spray. P280 Applied protective gloves / protective clothing / eye protection / face protection. P271 AppliedUse only outdoors or in a well-ventilated area. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304 + P340 IF YOU GET SITO THE AIRWAY: Remove or carry out the casualty to fresh air and ensure that he or she can breathe freely. P308 + P313 In the case of naracontact or contact: Get medical advice / attention. P302 + P352 IF ON SKINA: Wash with plenty of water. P501 Contents/ container should be disposed of in accordance with local / regional / national / international regulations. Additional data: The use of this product may cause allergic reactions in people allergic to diisocyanates. People suffering from asthma, eczema or skin disorders 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 (e.g. type A1 according to standard EN 14387) is used. Do not pierce or burn, even after use. Protect against sunlight. Do not expose to temperatures exceeding 50 ° C / 122 ° F. Do not spray over an open flame or other ignition source. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. EUH204 Contains isocyanates. May produce an allergic reaction. 2.3. Other dangers Results of PBT and vPvB assessment · PBT:Not applicable. · vPvB:Not applicable.

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I I a manufactura d'a constalla conte		
Hazardous ingredients:		
CAS: 9016-87-9	Diphenylmethane diisocyanate, isomers and homologues Resp. Meaning. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	30.0 - 60.0%
CAS: 13674-84-5 Reg.No .: 01-2119486772-26-xxxx	tri (2-chloro-1-methylethylene) phosphate Acute Tox. 4. H302	<25.0%
CAS: 74-98-6 EINECS: 200-827-9 Reg.No .: 01-21194869440-21- xxxx	propane Flam. Gas 1, H220; Press. Gas C, H280	<15.0%
CAS: 106-97-8 EINECS: 203-448-7 Reg.No .: 01-2119474691-31-xxxx	butane Flam. Gas 1, H220; Press. Gas C, H280	<15.0%
CAS: 75-28-5 EINECS: 200-857-2 Reg.No .: 01-2119485395-27-xxxx	isobutane Flam. Gas 1, H220; Press. Gas C, H280	<15.0%
CAS: 86675-46-9 Reg.No .: 01-2119972940-xx	halogenated polyether polyols Acute Tox. 4, H302	<15.0%
CAS: 115-10-6 EINECS: 204-065-8 <b>AdglNio.nel 2019972128-37-</b> 6001he wording of the listed hazard	Acute 1 ox. 4, H302 dimethyl ether Flam. Gas 1, H220; Press. Gas C, H280 statements, see section 16.	<10.0%

### **SECTION 4: First aid measures**

#### <sup>•</sup> 4.1. Description of first aid measures

• General tips:

Symptoms of poisoning may not appear until several hours, therefore medical supervision is necessary for at least 48 hours after the accident.

<sup>•</sup> After inhalation:

Supply plenty of fresh air and call a physician to be safe.

- In case of unconsciousness place patient in a stable side position for transport.
- <sup>•</sup> After skin contact:

Remove the foam with a cloth. Unhardened foam remains with a mild solvent, e.g. ethyl alcohol. Wash your hands thoroughly and clean the skin surface with soap and water. Hardened foam can be removed mechanically with a brush, soap and plenty of water. Use barrier cream after washing off impurities.

- <sup>•</sup> After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- $\cdot$  After swallowing: Rinse mouth and then drink plenty of water.
- <sup>•</sup> Tips for the doctor:
- 4.2. The most important acute and delayed symptoms and effects of exposure

No further relevant information available

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(continued from page 3) • 4.3. Indication of any immediate medical attentionand special treatment of the victim No further relevant information available

## **SECTION 5: Fire-fighting measures**

<sup>•</sup> 5.1. Extinguishing media

- · Useful extinguishing agents:
- Carbon dioxide.
- Fire extinguishing
- powder. Foam. Water fog

Adapt fire extinguishing measures to the environment.

- <sup>•</sup> 5.2. Special hazards related to the substance or mixture
- Can form explosive gas-air mixtures.

Formation of poisonous gases is possible during heating or in the event of fire.

- <sup>•</sup> 5.3. Information for fire brigades
- Special protective equipment:

Wear self-contained respiratory protective device. Wear fully protective clothing.

# SECTION 6: Procedure in the event of an unintentional release to the environment

• 6.1. Personal precautions, protective equipmentand emergency procedures Keep away from ignition sources. Wear personal protective clothing. Do not inhale vapors /spray. Ensure

adequate ventilation. Wear protective clothing. Move unsecured persons to a safe place.

- 6.2. Environmental precautions:
- Do not empty into drains /surface waters /groundwater.

Inform competent authorities in case of seepage into water course or sewage system.

6.3. Methods and materials preventing the spread of contamination and used for removing contamination:

Uncured foam sticks easily, so be careful when removing it. Remove immediately with a cloth and solvents, e.g. acetone, alcohol. Remove hardened foam mechanically.

Dispose contaminated material as waste according to

- section 13. Ensure adequate ventilation.
- 6.4. Reference to other sections See section 13 for disposal information.

## SECTION 7: Procedure with substances and mixtures and their storage

#### <sup>•</sup> Handling method:

- <sup>•</sup> 7.1. Precautions for safe handling
- Ensure good ventilation /exhaustion at the workplace. Open containers and handle them carefully.

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## **SECTION 8: Exposure controls / personal protection**

· 8.1. C	ontrol parameters	
· Ingred	dients with controlled limit values depending on the workplace:	
CAS: 1	01-68-8 4,4'-methylenediphenyl diisocyanate	
NDS	0.05mg / m³	
NDSP	NDSCh:0.2 mg / m <sup>3</sup>	
CAS: 1	06-97-8 butane	
NDS	NDSCh:3000 mg / m <sup>3</sup>	
	NDS:1900 mg / m <sup>3</sup>	
CAS: 7	74-98-6 propane	
NDS	1800mg / m <sup>3</sup>	
CAS: 1	15-10-6 dimethyl ether	
NDS	1000mg / m <sup>3</sup>	
• <b>8.2.</b> E	xposure controls	
· Perso	nal protective equipment:	
. Genei	al protection and hygiene measures:	
Do not eat, drink, smoke or snuff while working. Keep away		
from fo	od, beverages and food.	
Immediately remove all soiled and contaminated		

clothing. Wash hands before breaks and at the end of work.

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<sup>•</sup> Respiratory protection:

For brief or minor stresses, a breathing filter device; in the case of intensive or longer exposure, use a respiratory protection device independent of the ambient air.

Hand protection:



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 breakthrough times, rates of diffusion and the degradation.

- The material from which the gloves are made
- Polyethylene gloves

The selection of the suitable gloves does not only depend on the material, but also on further quality features 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 the 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 closed safety glasses

· Body protection: Protective work clothing.

9.1. Information on basic physical an	d chemical properties
Annearance:	
Form:	Aerosol
	In a pressurized container - liquid; after leaving the container - foam
Color:	Gray
Smell:	Characteristic
PH value:	-
Change in condition Melting point / Melting range: It is no	t specified
Boiling point / Boiling range:	Not suitable for use because of the aerosol.
Flash-point:	<0 ° C (propellant)
Self-ignition:	> +350 ° C (propellant)
Danger of explosion:	The product is not explosive, but formation of explosive



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• Explosion limits: Lower:	
Upper:	+/- 1.5 Vol%
	+/- 11.0 Vol%
Steam pressure:	> 500 kPa (in container)
•	<1 * 105mmHg in 25 ° C(MDI)
· Density at 20 ° C:	≤1.3 (PMDI)g / cm³
• Solubility in / Miscibility with	
Water:	Insoluble. Reacts
	with water
<ul> <li>Partition coefficient (n-octanol / water):</li> </ul>	Undefined
9.2. Other informations	No further relevant information available

## **SECTION 10: Stability and reactivity**

- **10.1. Reactivity** No further relevant information available.
- <sup>1</sup>10.2. Chemical stability
- <sup>•</sup> Thermal decomposition / conditions to be avoided:
- No decomposition when stored and handled as intended.
- \* 10.3. Possibility of hazardous reactions Dangerous reactions are unknown.
- \* 10.4. Conditions to Avoid No further relevant information available.
- <sup>•</sup> 10.5. Incompatible materials:
- Reacts strongly with water, with substances containing free active hydrogen atom.
- · 10.6. Hazardous decomposition products: Dangerous decomposition products are unknown.

### **SECTION 11: Toxicological information**

- <sup>•</sup> 11.1. Information on toxicological effects
- <sup>·</sup> Acute toxicity
- Harmful if inhaled.

Relevant classified LD7 LC50 values.			
CAS: 9016-	CAS: 9016-87-9 Diphenylmethane diisocyanate, isomers and homologues		
Oral	LD50	> 10,000 mg / kg (rat) (OECD401)	
Dermal	LD50	> 9400 mg / kg (rabbit) (OECD402)	
CAS: 101-6	CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	9200 mg / kg (rat)	
Inspiratory	LC50 /	178 mg / I (rat)	
	4h		
CAS: 13674	CAS: 13674-84-5 tri (2-chloro-1-methylethylene) phosphate		
Oral	LD50	> 2000 mg / kg (rat)	
Dermal	LD50	> 2000 mg / kg (rat)	
Inspiratory Primary ir	LC50 / ritant eff	> 0.05 mg/L(rat) ect: Effect Species Method:	
Corrosive /irritating effect on the skin			
Irritating to t	he skin.	-	
0		(continued on page 8)	



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Serious eye damage / eye irritation Irritating to eyes.
Respiratory or skin sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Mutagenic effect on reproductive cells Based on the available data, the classification criteria are not met.
Carcinogenicity Suspected of causing cancer.
Harmful effect on reproductionBased on the available data, the classification criteria are not met.
Toxic effect on target organs - single exposure

- May cause respiratory irritation.
- Specific target organ toxicity repeated exposure
- May cause damage to organs through prolonged or repeated exposure.
- Aspiration hazardBased on the available data, the classification criteria are not met.

## **SECTION 12: Ecological information**

#### <sup>•</sup> 12.1. Toxicity

#### · Aquatic toxicity:

- CAS: 13674-84-5 tri (2-chloro-1-methylethylene) phosphate
- EC50 47 mg / I (96h) (Algae)
- 12.2. Persistence and degradability It is not biodegradable.
- <sup>•</sup> Behavior in environmental areas:
- \* **12.3. Bioaccumulative potential** It does not accumulate in living organisms.
- 12.4. Mobility in soilNo further relevant information available
- <sup>•</sup> Further ecological tips:
- General tips:
- Water hazard class 1 (self-determination): slightly harmful to water.
- Do not allow undiluted product or in large quantities to reach ground water, surface water or sewage system.
- 12.5. Results of PBT and vPvB assessment
- **PBT**:Not applicable.
- **vPvB**:Not applicable.
- \* 12.6. Other harmful effects No further relevant information available

### **SECTION 13: Disposal considerations**

#### <sup>•</sup> 13.1. Waste neutralization methods

**Recommendation:** 

It must not be disposed of together with household garbage. Do not let product enter drains.

· European Waste Catalog		
07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES	
07 02 00	wastefrom the production, preparation, marketing and use of plastics and rubbers i synthetic fibers	
07 02 08	other still bottoms and reaction residues	
*	(continued on page 9)	



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07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 02 00	wastes from the production, preparation, marketing and use of plastics, rubbers and synthetic fibers
07 02 13	
15 00 00	WASTE PACKAGING, SORBENTS, WIPING FABRICS, MATERIALS FILTRATION AND PROTECTIVE CLOTHING NOT PROTECTED ELSEWHERE
15 01 00	packaging waste (including separately collected municipal waste packaging)
15 01 05	multi-material packaging

<sup>•</sup> Uncleaned packaging:

• **Recommendation:** Disposal in accordance with local regulations (see section 15.).

## **SECTION 14: Transport information**

<ul> <li>14.1. UN number (UN number)</li> <li>ADR, IMDG, IATA</li> </ul>	1950	
<ul> <li>14.2. UN proper shipping name</li> <li>ADR</li> <li>IMDG, IATA</li> </ul>	1950 AEROSOLS AEROSOLS	
14.3. Transport hazard class (es)		
ADR		
Class	2 gases	
·Label	2.1	
· IMDG, IATA		
· Class	2 gases	
· Label	2.1	
<sup>•</sup> 14.5. Environmental hazards:		
• Marine pollutants:	Not.	
14.6. Special precautions for		
users	Note: gases	
· Kemler number:	-	
· EMS number:	FD, SU	
<ul> <li>14.7. Bulk transport in accordance with Annex II to MARPOL 73/78 convention and the code</li> </ul>		
IBC	Not applicable.	
<ul> <li>Transport / further information:</li> </ul>		
ADR		
· Limited quantities (LQ)	LQ2	(continued on page 10)



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· Transport category	2
· Remarks:	Exemption from ADR regulations on the LQ basis(rule 3.4.5) - inner packagingcapacity max. 1 liter, in the outer packaging - gross weight max. 30kg, - inner packagingcapacity max. 1 liter, on a common base, shrink-wrapped - gross weight max. 20kg.
UN "Model Regulation":	UN1950 AEROSOLS, 2.1

### **SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations specific for the substance and mixture

Country specific regulations:

a) Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws No. 63, item 322, as amended).

b) Regulation of the Minister of Healthof August 10, 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, No. 0, item 1018, as amended).

c) Regulation of the Minister of Economyof 21 December 2005 on essential requirements for

personal protective equipment (Journal of Laws 2005, No. 259, item 2173).

d) Regulation of the Minister of Health of 20 April 2012 on labeling packages of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, No. 0, item 445).

e) Regulation of the Ministry of Labor and Social Policy of November 29, 2002 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws No. 217, item 1833, as amended).

f) Regulation of the Minister of Healthof February 2, 2011 on tests and measurements of factors harmful to health in the work environment (Journal of Laws No. 33, item 166).

g) StatementGovernmental of 23 March 2011 on the entry into force of amendments to Annexes A and B of the European Agreement on the International Carriage of Dangerous Goods by Road (ADR), drawn up in Geneva on September 30, 1957 (Journal of Laws No. 110, item 641).

h) The Act of 14 December 2012 on waste (Journal of Laws of 2013, item 21), as amended d.

i) Act of 13 June 2013 on the management of packaging and packaging waste (Journal of Laws of 2013, No. 0, item 888).

j) 2008/98 / ECDirective of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives, as amended d.

k) Regulation of the Ministry of Environmental Protection of September 27, 2001 on the waste catalog (Journal of Laws No. 112, item 1206).

I) Regulation of the Minister of Economyof 21 December 2005 on essential requirements for

personal protective equipment (Journal of Laws No. 259, item 2173).

m) 1907/2006 / EC Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45 / EC and repealing Council Regulation (EEC) No. 793/93 and No. 1488 / 94, as well as Council Directive 76/769 / EEC and Commission Directive 91/155 / EEC, 93/67 / EEC, 93/105 / EC and 2000/21 / EC as amended. d.

n) 1272/2008 / EC Regulation of the European Parliamentand of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEC and 1999/45 / EC, and amending Regulation (EC) No 1907/2006 as amended d.

o) 94/62 / ECDirective of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste, as amended d.

p) Regulation of the Minister of Environment of 24 July 2006 on the conditions to be met when discharging sewage into waters or into the ground, and on substances particularly harmful to the aquatic environment (Journal of Laws of 2006, No. 137, item 984).

r) Actof May 11, 2001 on packaging and packaging waste (Journal of Laws 01.63.638) as amended.

s) Regulation of the Minister of the Environmentof September 27, 2001 on the catalog of waste (Journal of Laws 01.112.1206).

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(continued from page 10) t) Regulation of the Minister of Labor and Social Policy of 6 June 2014 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2014, No. 0, item 817).

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

#### **SECTION 16: Other information**

The data is based on the present state of our knowledge, however, it does not define the production characteristics in a definitive way and cannot be used as a justification for legally valid contracts.

#### Relevant phrases

Date of printing:

H220 Extremely flammable gas.

H280 Contains gas under pressure; may burst if heated.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H319

Irritating to eyes.

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.

**Recommended use limitation** 

The above information is based on the current state of knowledge and applies to the product as it is used. Data on this product are presented in order to comply with safety requirements and not to guarantee its specific properties.

If the conditions of use of the product are not under the manufacturer's control, the responsibility for the safe use of the product, and in particular for compliance with legal regulations, falls on the user.

This safety data sheet was created on the basis of the applicable onesin Poland, regulations on chemical substances and preparations. Pursuant to the provisions of Art. 23 of the Act of 11 January 2001 on chemical substances and preparations (Journal of Laws No. 11, item 84, as amended), the Inspector for Chemical Substances and Preparations was informed about the introduction of the preparation on the market in the territory of the Republic of Poland. dangerous polyurethane foam.

See the relevant product data sheet.

#### Department issuing the data list:Product safety department.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labeling of Chemicals

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very

Bioaccumulative

Flam. Gas 1: Flammable gases, Hazard Category 1

Aerosol 1: Flammable aerosols, Hazard Category 1 Press. Gas C: Gases under pressure: Compressed

gas Acute Tox. 4: Acute toxicity, Hazard Category 4

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Skin Irrit. 2: Skin corrosion / irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage / eye irritation, Hazard
Category 2 Resp. Meaning. 1: Sensitisation - Respirat.,
Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category
1 Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

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