

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Fire Guard NBS PU Foam 586

Product no.

-

REACH registration number

Not applicable

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

Relevant identified uses of the substance or mixture

1-component polyurethane foam ready for use.

Uses advised against

For professional and industrial use only. Not recommended for DIY-use.

The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address

Dana Lim A/S
Københavnsvej 220
DK-4600 Køge
Denmark
phone: +45 56 64 00 70
fax: +45 56 64 00 90

Contact person

Product Safety Department

E-mail

info@danalim.dk

SDS date

2017-01-30

SDS Version

2.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Aerosol 1; H222, H229
Acute Tox. 4; H302 + H332
Skin Irrit. 2; H315
Skin Sens. 1; H317
Eye Irrit. 2; H319
Resp. Sens. 1; H334
STOT SE 3; H335
Carc. 2; H351
STOT RE 2; H373
See full text of H-phrases in section 2.2.

2.2. Label elements

▼ Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

- Extremely flammable aerosol. (H222)
- Pressurised container: May burst if heated. (H229)
- Harmful if swallowed or if inhaled. (H302 + H332)
- Causes skin irritation. (H315)
- May cause an allergic skin reaction. (H317)
- Causes serious eye irritation. (H319)
- May cause allergy or asthma symptoms or breathing difficulties if inhaled. (H334)
- May cause respiratory irritation. (H335)
- Suspected of causing cancer. (H351)
- May cause damage to organs through prolonged or repeated exposure. (H373)

Safety statement(s)

- General** If medical advice is needed, have product container or label at hand. (P101).
Keep out of reach of children. (P102).
- Prevention** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210).
Do not spray on an open flame or other ignition source. (P211).
Do not pierce or burn, even after use. (P251).
Do not breathe spray. (P260).
Use only outdoors or in a well-ventilated area. (P271).
Wear protective gloves/eye protection/face protection. (P280).
[In case of inadequate ventilation] wear respiratory protection. (P284).
- Response** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
(P305+P351+P338).
- Storage** Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412).
- Disposal** Dispose of contents/container to an approved waste disposal plant. (P501).

Identity of the substances primarily responsible for the major health hazards

Diphenyl methane diisocyanate, isomers and homologues, Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated, tris(2-chloro-1-methylethyl) phosphate, triethylphosphat

2.3. Other hazards

This product contains substances considered or proven carcinogenic.

Additional labelling

Contains isocyanates. May produce an allergic reaction. (EUH204)

Additional warnings

-

VOC

-

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME:	Diphenyl methane diisocyanate, isomers and homologues
IDENTIFICATION NOS.:	CAS-no: 9016-87-9
CONTENT:	40-60%
CLP CLASSIFICATION:	Acute Tox. 4, STOT RE 2, STOT SE 3, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, Carc. 2
NOTE:	H315, H317, H319, H332, H334, H335, H351, H373 IP
NAME:	tris(2-chloro-1-methylethyl) phosphate
IDENTIFICATION NOS.:	CAS-no: 13674-84-5 EC-no: 237-158-7
CONTENT:	15-25%
CLP CLASSIFICATION:	Acute Tox. 4 H302
NAME:	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, thoxylated
IDENTIFICATION NOS.:	CAS-no: 86675-46-9
CONTENT:	15-25%

CLP CLASSIFICATION:	Acute Tox. 4 H302
NAME:	1,1-difluorethan
IDENTIFICATION NOS.:	CAS-no: 75-37-6 EC-no: 200-866-1
CONTENT:	5-10%
CLP CLASSIFICATION:	Comp. Gas, Flam. Gas 1 H220, H280
NAME:	isobutane
IDENTIFICATION NOS.:	CAS-no: 75-28-5 EC-no: 200-857-2 Index-no: 601-004-00-0
CONTENT:	3-5%
CLP CLASSIFICATION:	Comp. Gas, Flam. Gas 1 H220, H280
NAME:	Dimethyl ether
IDENTIFICATION NOS.:	CAS-no: 115-10-6 EC-no: 204-065-8 REACH-no: 01-2119472128-37-xxxx Index-no: 603-019-00-8
CONTENT:	3-5%
CLP CLASSIFICATION:	Comp. Gas, Flam. Gas 1 H220, H280
NOTE:	SL
NAME:	propane
IDENTIFICATION NOS.:	CAS-no: 74-98-6 EC-no: 200-827-9 Index-no: 601-003-00-5
CONTENT:	1-3%
CLP CLASSIFICATION:	Comp. Gas, Flam. Gas 1 H220, H280
NAME:	triethylphosphat
IDENTIFICATION NOS.:	CAS-no: 78-40-0 EC-no: 201-114-5
CONTENT:	1-3%
CLP CLASSIFICATION:	Acute Tox. 4, Eye Irrit. 2 H302, H319

(*) See full text of H-phrases in chapter 16. Occupational exposure limits are listed in section 8, if these are available.
S = Organic solvent P = Prepolymer isocyanate I = Isocyanate monomer L = European occupational exposure limit.

Other information

ATEmix(inhale, vapour) = > 10 - 14,268
 ATEmix(inhale, dust/mist) = 1,296 -
 ATEmix(inhale, gas) = 3892,064 - 5838,096
 ATEmix(Dermal) = > 1000 - 1427,088
 ATEmix(oral) = 432,448 - 648,672
 Eye Cat. 2 Sum = Sum(Ci/S(G)CLi) = 4,2 - 6,3
 Skin Cat. 2 Sum = Sum(Ci/S(G)CLi) = 4 - 6

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact The National Poisons Information Service (dial 111, 24 h service). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

Remove contact lenses and open eyes widely. Flush eyes with water or saline water(20-30°C) for at least 15 minutes. Seek medical assistance and continue flushing during transport.

Ingestion

In the case of ingestion, contact a doctor immediately and bring safety data sheet or label. If the person is conscious, give them water. DO NOT try to induce vomiting, unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

▼ **4.2. Most important symptoms and effects, both acute and delayed**

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

Sensitisation: This product contains substances, which may produce an allergic reaction through inhalation. The allergic reaction is typically taking place within an hour subsequent to exposure. The reaction results in an inflammatory reaction to the lungs.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼ **4.3. Indication of any immediate medical attention and special treatment needed**

No special

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

▼ **5.1. Extinguishing media**

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire.

▼ **5.2. Special hazards arising from the substance or mixture**

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous catabolic substances are produced. These are: Halogenated compounds. Carbon oxides. Fire will result in dense black smoke.

Exposure to combustion products may harm your health. Fire fighters should wear appropriate protection equipment. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

▼ **5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

▼ **6.1. Personal precautions, protective equipment and emergency procedures**

Avoid inhalation of vapours from spilled material. Avoid direct contact with spilled substances. Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

▼ **6.2. Environmental precautions**

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities. It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

▼ **6.3. Methods and material for containment and cleaning up**

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

▼ **6.4. Reference to other sections**

See section on "Disposal considerations" in regard of handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

▼ **7.1. Precautions for safe handling**

Avoid static electricity. Protect electrical equipment in accordance with current standards. To divert static electricity during transmission, containers must be grounded and connected by wire with the receiving containers. Do not use spark-forming tools.

Smoking, storage of tobacco, consumption and storage of food or liquids are not allowed in the workrooms. See section on 'Exposure controls/personal protection' for information on personal protection. Avoid direct contact with the product.

▼ **7.2. Conditions for safe storage, including any incompatibilities**

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Storage temperature

Frost free

▼ 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

▼ OEL

Dimethyl ether (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): 400 ppm | 766 mg/m³

Short-term exposure limit (15-minute reference period): 500 ppm | 958 mg/m³

isobutane (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): 600 ppm | 1450 mg/m³

Short-term exposure limit (15-minute reference period): 750 ppm | 1810 mg/m³

Comments: n-butane

Diphenyl methane diisocyanate, isomers and homologues

Long-term exposure limit (8-hour TWA reference period): - ppm | 0,02 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | 0,07 mg/m³

▼ DNEL / PNEC

No data available

8.2. Exposure controls

▼ Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

▼ Observe general occupational hygiene standards.

Exposure scenarios

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

▼ Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

▼ Appropriate technical measures

Outlet air that contain the substances shall not be recirculated. Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and - showers are clearly marked.

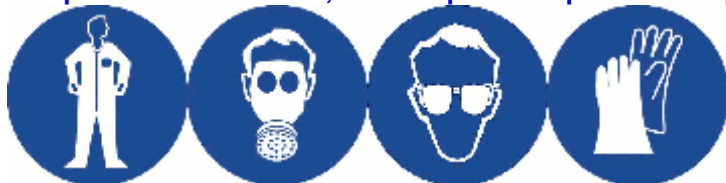
▼ Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

▼ Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment



Generally

Use only CE marked protective equipment.

▼ Respiratory Equipment

If ventilation at the work place is insufficient, use a half- or whole mask with an appropriate filter or an air-supplied breathing apparatus depending on the concrete work situation and how long you will be using the product.

▼ Skin protection

Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged periods of work with the product.

▼ Hand protection

Wear protective gloves. The specific work situation is unknown. Contact the suppliers of the gloves for further advice regarding the appropriate glove type. Please note that elastic gloves stretch when used. The thickness of the gloves, and therefore their penetration time, will be reduced. Moreover, the temperature of the glove in use is about 35°C, while the standard test, EN 374-3, is done at 23°C. The penetration time is

therefore reduced by a factor of 3.

▼ **Eye protection**

Wear safety glasses with side shields.

SECTION 9: Physical and chemical properties

▼ **9.1. Information on basic physical and chemical properties**

Form	Aerosol
Colour	Beige, sand
Odour	Characteristic
pH	No data available.
Viscosity (40°C)	No data available.
Density (g/cm ³)	1,1

▼ **Phase changes**

Melting point (°C)	No data available.
Boiling point (°C)	-1
Vapour pressure	No data available.

▼ **Data on fire and explosion hazards**

Flashpoint (°C)	-1
Ignition (°C)	No data available.
Self-ignition (°C)	No data available.
Explosion limits (Vol %)	No data available.

▼ **Solubility**

Solubility in water	Insoluble
n-octanol/water coefficient	No data available.

▼ **9.2. Other information**

Solubility in fat (g/L)	No data available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

▼ **10.2. Chemical stability**

The product is stable under the conditions, noted in the section "Handling and storage".

▼ **10.3. Possibility of hazardous reactions**

No special

▼ **10.4. Conditions to avoid**

Avoid static electricity.

▼ **10.5. Incompatible materials**

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Substance	Species	Test	Route of exposure	Result
Diphenyl methane diisocyanate,...	Rat	LC50	Inhalation	490 mg/m ³ , 4h
Diphenyl methane diisocyanate,...	Rat	LD50	Oral	>2000 mg/kg

▼ **Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

▼ **Respiratory or skin sensitisation**

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

No data available.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available.

STOT-single exposure

May cause respiratory irritation.

▼ **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available.

▼ **Long term effects**

Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The substances are classified as carcinogenic or listed by the Danish Working Environment Authority as substances suspected of being carcinogenic. The substances are covered by the DWEA's regulations on work involving the risk of cancer. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Species	Test	Duration	Result
Diphenyl methane diisocyanate,...	Daphnia	EC50	24h	>1000 mg/l

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
No data available.			

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BCF
No data available.			

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No special

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

▼ **Waste**

EWC code	Description
16 05 04	gases in pressure containers (including halons) containing dangerous substances

Specific labelling

-

▼ **Contaminated packing**

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 – 14.4

This product is within scope of the regulations of transport of dangerous goods.

▼ **ADR/RID**

14.1. UN number	1950
14.2. UN proper shipping name	-
14.3. Transport hazard class(es)	2.1
14.4. Packing group	-
Notes	-

Tunnel restriction code	-
IMDG	
UN-no.	1950
Proper Shipping Name	Aerosols, (flammable)
Class	2.1
PG*	-
EmS	-
MP**	-
Hazardous constituent	-
IATA/ICAO	
UN-no.	1950
Proper Shipping Name	Aerosols, (flammable)
Class	2.1
PG*	-

14.5. Environmental hazards

-

14.6. Special precautions for user

-

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

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product cf. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

Use of this product requires dedicated training in work with polyurethane and epoxy products.

Additional information

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Sources

COUNCIL DIRECTIVE 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677. The Stationery Office, 2002.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP). EC regulation 1907/2006 (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H220 - Extremely flammable gas.

H280 - Contains gas under pressure; may explode if heated.

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.

The full text of identified uses as mentioned in section 1

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Other symbols mentioned in section 2



Other

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

The classification of the mixture in regard of physical hazards has been based on experimental data. The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification. The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products. A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The safety data sheet is validated by

Robert Pedersen

**Date of last essential change
(First cipher in SDS version)**

2015-11-19

**Date of last minor change
(Last cipher in SDS version)**

2015-11-19