

SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard
Z400.1-2010



Trade Name: Fire Protection Foam PYROSIT®
Revision date: 7/21/2017
Language: EN-US
Pages: 11

1. Product and company identification

1.1 Product identifier

Trade name: Fire Protection Foam PYROSIT®
Material number: 7203900
Type: FSU-F

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

General use: Di-/poly-isocyanate component to produce polyurethanes. For industrial purposes only.

1.3 Details of the supplier of the safety data sheet

Supplier

OBO Bettermann Holding GmbH & Co. KG
P.O. Box 1120
58694 Menden
Germany

Dept. responsible for information:

Customer Service
Tel.: +49 (0) 23 73 / 89 - 17 00
export@obo.de

1.4 Emergency phone number

REACH Registration of Chemicals GmbH
Tel.: +49 (0)700 24112112 (OBO)

2. Hazards identification

2.1 Emergency overview

Appearance

Physical state at 68 °F and 101.3 kPa: liquid
Color: red brown

Odor

Characteristic

Classification

Skin Irritation - Category 2; Eye Irritation - Category 2A; Respiratory Sensitizer -
Category 1; Sensitization - skin - Category 1; Carcinogenicity - Category 2;
Specific Target Organ Toxicity (Single Exposure) - Category 3;
Specific Target Organ Toxicity (Repeated Exposure) - Category 2

2.2 Hazard symbols



Signal word

Danger

Hazard statements

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

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

May cause respiratory irritation.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

Obtain special instructions before use.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash hands and face thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

In case of inadequate ventilation wear respiratory protection.

IF ON SKIN: Wash with plenty of water/soap.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor if you feel unwell.

Specific treatment (see , First aid , on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Take off contaminated clothing.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container to hazardous or special waste collection point.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

Persons with over-sensitive breath ways (e.g. asthma, chronic bronchitis) are not allowed to use the product due to safety regulations.

Vapors and aerosols are the main dangers to the respiratory tract.

Respiratory symptoms may still occur several hours after overexposure.

Special danger of slipping by leaking/spilling product.

see section 11: Toxicological information

3. Composition / Information on ingredients

3.1 Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 9016-87-9	Diphenylmethane diisocyanate (isomers, homologues)	< 30 %	Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Carcinogenicity - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 2.
trade secret	Catalyst	< 0.5 %	Acute Toxicity - oral - Category 4.
trade secret	Catalyst	< 0.04 %	Acute Toxicity - oral - Category 4. Skin Corrosion - Category 1B. Germ cell mutagenicity - Category 2. Reproductive toxicant - Category 1B. Specific Target Organ Toxicity (Repeated Exposure) - Category 1.
trade secret	Polyole	<= 100 %	not applicable
trade secret	Phosphate	<= 100 %	not applicable
trade secret	Non-halogen flame retardant	<= 100 %	not applicable
trade secret	Smoke Suppressant	<= 100 %	not applicable
CAS 7732-18-5	Water	<= 100 %	not applicable
trade secret	Polysiloxanes	<= 100 %	not applicable
trade secret	Drying Agent	<= 100 %	not applicable

4. First aid measures

4.1 General information

Immediately remove any wetted clothing, shoes or stockings.

In case of inhalation

Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Do not allow victim to become chilled. Keep victim warm.

Keep victim calm and seek medical attention immediately.

If victim is at risk of losing consciousness, position and transport on their side.

Following skin contact

Immediately clean with water and soap and, if available, apply a generous amount of polyethylene glycol 400. In case of skin reactions, consult a physician.

After eye contact

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Afterwards, consult an ophthalmologist immediately.

After swallowing

Rinse mouth. Do not induce vomiting. Immediately get medical attention.

4.2 Most important symptoms/effects, acute and delayed

Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation.

4.3 Information to physician

Product causes irritation of respiratory tracts and may possibly increase sensitivity of skin and respiratory tracts. Treatment of the acute irritation or bronchial narrowing is mainly symptomatic. Depending on the scale of exposition, as well as aches and pains resulting, long-term medical care may be required.

5. Fire fighting measures

5.1 Flash point/flash point range

Not applicable

Auto-ignition temperature

Not applicable

Suitable extinguishing media

Foam, dry chemical powder, carbon dioxide

In case of large fires: also water fog

Extinguishing media which must not be used for safety reasons

Strong water jet

5.2 Specific hazards arising from the chemical

In case of fire may be liberated: Isocyanate vapors, traces of hydrogen cyanide, nitrous fumes, carbon monoxide

5.3 Protective equipment and precautions for firefighters

In case of fire may be liberated: Isocyanate vapors, traces of hydrogen cyanide, nitrous fumes, carbon monoxide

5.4 Additional information:

Cool endangered containers with water spray and, if possible, remove from danger zone.

Remove persons not involved upwind.

Do not allow water used to extinguish fire to enter drains, ground or waterways.

6. Accidental release measures

6.1 Personal precautions

Avoid exposure. Keep unprotected people away. Wear appropriate protective equipment.

Provide adequate ventilation. Avoid contact with the substance.

Use a breathing protection against vapors/aerosol.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods for clean-up

Take up mechanically, placing in appropriate containers for disposal. Final cleaning.

6.4 Additional information

Special danger of slipping by leaking/spilling product.

7. Handling and storage

7.1 Handling

Advices on safe handling

Avoid exposure - obtain special instructions before use.

Provide adequate ventilation, and local exhaust as needed.

Airflow should move away from persons.

The effectiveness of the facilities must be checked at regular intervals.

Avoid contact with skin and eyes. Wear appropriate protective equipment.
Do not breathe dusts or mists. Work place should be equipped with a shower and an eye rinsing apparatus.

7.2 Storage

Requirements for storerooms and containers

Keep containers tightly closed and at a temperature between 41 °F and 86 °F. Keep in a cool, well-ventilated place. Keep container dry. Protect from humidity and water.

Do not allow the product to enter the ground.

Hints on joint storage

Keep away from food and drinks.

Further details

Use caution when opening containers under pressure.

8. Exposure controls / personal protection

8.1 Exposure guidelines

Occupational exposure limit values

CAS No.	Designation	Type	Limit value
CAS 9016-87-9	Diphenylmethane diisocyanate (isomers, homologues)	NIOSH: Ceiling	0.2 mg/m ³ ; 0.02 ppm (4,4'-Methylenediphenyl diisocyanate - CAS 101-68-8)
		USA: NIOSH: TWA	0.05 mg/m ³ ; 0.005 ppm (4,4'-Methylenediphenyl diisocyanate - CAS 101-68-8)
trade secret	Catalyst	USA: ACGIH: STEL	10 mg/m ³ (inhalable fraction Aerosol)
		USA: ACGIH: STEL	50 ppm (vapor)
		USA: ACGIH: TWA	25 ppm (vapor)
trade secret	Catalyst	USA: ACGIH: STEL	0.2 mg/m ³ (May be absorbed through the skin.)
		USA: ACGIH: TWA	0.1 mg/m ³ (May be absorbed through the skin.)
		USA: NIOSH: TWA	0.1 mg/m ³ (May be absorbed through the skin.)
		USA: OSHA: TWA	0.1 mg/m ³

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection

Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection

Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138

Glove material:

Nitrile rubber - NBR \geq 0,35 mm

Butyl caoutchouc (butyl rubber) - IIR \geq 0,5 mm,

Fluororubber (Viton) - FKM (\geq 0,4 mm)

polyvinyl chloride - PVC (\geq 0,5 mm).

Breakthrough time: $>$ 480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection

Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.

Filter type: Full-facepiece, air-purifying respirator equipped with a combination organic vapor/N95 filter cartridge.

General hygiene considerations

Avoid exposure - obtain special instructions before use.

Avoid contact with the substance. Do not breathe dusts or mists.

Work place should be equipped with a shower and an eye rinsing apparatus.

Wash hands before breaks and after work.

Take off immediately all contaminated clothing.

Keep away from food, drink and animal feedingstuffs.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties**Appearance**

Physical state at 68 °F and 101.3 kPa: liquid

Color: red brown

Odor

characteristic

Odor threshold

No data available

pH value

Not applicable

Melting point/freezing point

Not determined

Initial boiling point and boiling range

Not determined

Flash point/flash point range

Not applicable

Evaporation rate

No data available

Flammability

Not determined

Explosion limits

LEL (Lower Explosion Limit): not applicable

UEL (Upper Explosive Limit): not applicable

Vapor pressure

At 77 °F: \leq 0.00001 kPa

Vapor density

No data available

Density

Approx. 1.3 g/mL

Water solubility

Practically insoluble

Partition coefficient: n-octanol/water:

Not determined

Auto-ignition temperature

Not applicable

Thermal decomposition

No data available

Viscosity, dynamic

Not relevant

Oxidizing characteristics:

No

Bulk density

Not applicable

10. Stability and reactivity

10.1 Reactivity

Reactions with alcohols, amines, liquid acids and bases.

Contact with Water liberates carbon dioxide.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Amines, alcohols, water

10.6 Thermal decomposition

No data available

11. Toxicological information

11.1 Toxicological tests**Toxicological effects**

The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.

Eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Respiratory Sensitizer -

Category 1 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Carcinogenicity - Category 2 = Suspected of causing cancer.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): Specific Target Organ Toxicity (Repeated Exposure) - Category 2 = May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Lack of data.

Other information

Persons with over-sensitive breath ways (e.g. asthma, chronic bronchitis) are not allowed to use the product due to safety regulations.

Information about Diphenylmethane diisocyanate (isomers, homologues):

A long-term studie with rats over two years with mechanically produced, inhalable aerosols (aerodyn. diametre of 95% under 5 µm) of polymer MDI (PMDI) and concentrations of 0.2, 1.0 and 6.0 mg PMDI/ m³ showed the following results:

The group of animals exposed to the highest concentration suffered an increased incidence of lung tumours, persistent inflammatory changes to the nose, respiratory tract and lungs, and yellowish deposits in the respiratory tract and lungs.

The animals in the 1.0 mg/m³ group exhibited slight irritation and inflammatory changes to the nose, respiratory tract and lungs, but did not develop lung tumours and/or deposits.

Animals in the 0.2 mg/m³ group suffered no irritation: this concentration was therefore deemed to constitute the 'no-effect level'.

For carcinogenic effects:

Information about Diphenylmethane diisocyanate (isomers, homologues):

Carcinogen Status:

IARC Rating: Group 3

OSHA Carcinogen: not listed

NTP Rating: not listed

Information about Non-halogen flame retardant:

Carcinogen Status:

IARC Rating: Group 3

OSHA Carcinogen: not listed

NTP Rating: not listed

Symptoms

In case of inhalation: Irritation of nose, throat, lung.

Headache, throat dryness, respiratory complaints, chest pressure.

May cause sensitization by inhalation. Susceptible persons may develop ailments and allergic reactions with some delay.

In case of ingestion: May be harmful if swallowed.

After contact with skin:

In case of a prolonged contact tanning and irritating effects may occur.

After eye contact:

Produces for a short time a weak reddening and tumefaction of the conjunctiva as well as a weak, reversible rendering turbid of the cornea.

12. Ecological information

12.1 Ecotoxicity

Information about Diphenylmethane diisocyanate (isomers, homologues):

Bacterial toxicity: EC50 > 100 mg/L /3h

Daphnia toxicity: EC50 Daphnia magna: > 1000 mg/L /24h

Fish toxicity: LC0 Brachydanio rerio (zebra-fish): > 1000 mg/L /96 h.

12.2 Mobility in soil

No data available

12.3 Persistence and degradability

Further details

Forms carbon dioxide and turns into a hard and insoluble by-product (poly urea) on the water's edge. This reaction is intensified by surface-active substances (e.g. liquid soaps) or water soluble solvents. Based upon current knowledge, poly urea is inert and will not decompose.

12.4 Additional ecological information

General information

Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

13.1 Product

Recommendation

Non-reacted state:

ASN 080501*: Waste isocyanates

*= Evidence for disposal must be provided.

Reacted state:

ASN 080410: waste adhesives and sealants other than those mentioned in 08 04 09.

Dispose of waste according to applicable legislation.

Contaminated packaging

Dispose of waste according to applicable legislation.

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

14. Transport information

14.1 USA: Department of Transportation (DOT)

Proper shipping name

Not restricted

14.2 Sea transport (IMDG)

Proper shipping name

Not restricted

Marine pollutant

No

14.3 Air transport (IATA)

Proper shipping name

Not restricted

14.4 Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

15.1 National regulations - U.S. Federal Regulations

Diphenylmethane diisocyanate (isomers, homologues)

TSCA Inventory: listed; EPA flags XU

TSCA HPVC: not listed

CFR § 172.101, Appendix A, DOT (Department of Transportation):

- MDI Reportable Quantity (RQ): 5000 lbs (= 2270 kg)

Carcinogen Status:

- IARC Rating: Group 3
- OSHA Carcinogen: not listed
- NTP Rating: not listed

Other Environmental Laws:

- SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard

Catalyst

TSCA Inventory: listed; EPA flags T

TSCA HPVC: not listed

Clean Air Act:

- Hazardous Air Pollutants: Code XOY
- SOCM Chemical: yes

Other Environmental Laws:

- CERCLA: RQ 5000 lbs.
- SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard

NIOSH Recommendations:

- Occupational Health Guideline: 0272

Non-halogen flame retardant

TSCA Inventory: listed

TSCA HPVC: not listed

Smoke Suppressant

TSCA Inventory: listed

TSCA HPVC: not listed

Water

TSCA Inventory: listed

TSCA HPVC: not listed

Drying Agent

TSCA Inventory: listed

Carcinogen Status:

- IARC Rating: Group 3
- OSHA Carcinogen: not listed
- NTP Rating: not listed

15.2 National regulations - U.S. State Regulations

Diphenylmethane diisocyanate (isomers, homologues)

California Proposition 65 code: -

Delaware Air Quality Management List:

DRQ: 100 - RQ State: State requirement differs from Federal

Catalyst

California Proposition 65 code: -

Delaware Air Quality Management List: DRQ: 5000 - RQ State: Federal Regulations Apply

Idaho Air Pollutant List: Title 585: AAC: 6.35 - EL: 0.846 - OEL: 127 - Title 586: -

Maine Hazardous Air Pollutants: Me 2005: HAP - Hap Rpt: 2000

Massachusetts Haz. Substance codes: 4 F9

Minnesota Haz. Substance: Codes: A - Ratings: 7.26 - Status: Air Pollutant Title III. TRI.

New Jersey RTK Hazardous Substance: DOT: 1142 - Sub No.: 0878 - TPQ: -

New York List of Hazardous Substances: RQ-Air: 1 - RQ-Land: 1 - Note: No Note Associated with this chemical.

Pennsylvania Haz. Substance code: E
 Washington Air Contaminant: Ceiling: 50 ppm - 125 mg

15.3 National regulations - Canada

DSL: listed ingredients: all

15.4 National regulations - Great Britain

Hazchem-Code

-

16. Other information

Text for labeling

Contains < 30 % Diphenylmethane diisocyanate (isomers, homologues), < 0.5 %
 Catalyst, < 0.04 % Catalyst, <= 100 % Polyole, <= 100 % Phosphate, <= 100 %
 Non-halogen flame retardant, <= 100 % Smoke Suppressant, <= 100 % Water, <= 100 % Polysiloxanes,
 <= 100 % Drying Agent. Safety data sheet available on request

Hazard rating systems



NFPA Hazard Rating:

- Health: 2 (Moderate)
- Fire: 1 (Slight)
- Reactivity: 2 (Moderate)

HMIS Version III Rating:

- Health: 2 (Moderate) - Chronic effects
- Flammability: 1 (Slight)
- Physical Hazard: 2 (Moderate)
- Personal Protection: X = Consult your supervisor

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		2
		X

Reason of change:

Changes in section 3: Composition / information on ingredients
 General revision

Date of first version

2/25/2013

16.1 Department issuing data sheet

Contact person

See section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.