

SAFETY DATA SHEET

PUR PRO

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	25.01.2007
Revision date	15.05.2024

1.1. Product identifier

Product name	PUR PRO
Article no.	T670005

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

Use of the substance / mixture	Sealant.
Professional use	Yes
Consumer use	No

1.3. Details of the supplier of the safety data sheet

Company name	Relekta AS
Office address	Innspurten 1A
Postal address	Postboks 6169 Etterstad
Postcode	0663
City	Oslo
Country	Norway
Telephone number	+47 22 66 04 00
Fax	+47 22 66 04 01
Email	post@relekta.no
Website	www.relekta.no
Enterprise No.	NO 831 881 372

1.4. Emergency telephone number

Emergency telephone	Telephone number: 22 59 13 00 Description: Giftinformasjonen
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Aerosol 1; H222 Aerosol 1; H229 Carc. 2; H351 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317
Substance / mixture hazardous properties	Extremely flammable aerosol. Pressurized container: May explode when heated. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Causes serious eye irritation. May cause respiratory irritation. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label	Polymethylene polyphenyl isocyanate, conc monomer $\geq 0.1\%$
Signal word	Danger
Hazard statements	H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. 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 ved innånding.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P210 Keep away from heat, hot surfaces, sparks, open flames and other sources

	of ignition. Smoking prohibited. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P308+P313 IF exposed or concerned: Get medical advice / attention. P405 Store locked up. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122°F. P501 Dispose of contents / container to godkjent avfallsmottak
Supplemental label information	EUH 204 Contains isocyanates. May produce an allergic reaction. - 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. As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

PBT / vPvB	The chemical contains no PBT or vPvB substances.
Hazard description, general	Aerosol cans may explode in a fire.
Physicochemical effects	Can form explosive gas-air mixture. The vapours are heavier than air and will spread along the floor.
Health effect	Inhalation of isocyanate vapors may cause shortness of breath, chest discomfort and reduced lung function.
Other hazards	Contains substances that are suspected of being hormone disruptors. Applies to CAS no: 1244733-77-4 Status "Under development (SEV)"

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Polymethylene polyphenyl isocyanate, conc monomer ≥ 0.1%	CAS No.: 9016-87-9	Carc. 2; H351 Acute Tox. 4; H332 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317	≥ 25 < 50 %	
Reaction products of phosphoryl trichloride and 2-methyloxirane Propellant mixture of:	CAS No.: 1244733-77-4 REACH Reg. No.: 01-2119486772-26	Acute Tox. 4; H302 Aquatic Chronic 3; H412	≥ 10 < 20 %	
Isobutane	CAS No.: 75-28-5 EC No.: 200-857-2 Index No.: 601-004-00-0 REACH Reg. No.:	Flam. Gas 1A; H220 Press. Gas (Liq.) ; H280	≥ 5 < 10 %	

Dimethyl ether	01-2119485395-27		
	CAS No.: 115-10-6	Flam. Gas 1A; H220	≥ 5 < 10 %
	EC No.: 204-065-8	Press. Gas (Liq.) ; H280	
	Index No.: 603-019-00-8		
Propane	REACH Reg. No.: 01-2119482128-37		
	CAS No.: 74-98-6	Flam. Gas 1A; H220	≥ 1 < 5 %
	EC No.: 200-827-9	Press. Gas (Liq.) ; H280	
	Index No.: 601-003-00-5		
REACH Reg. No.: 01-2119486944-21			
Remarks, substance	CAS-nr.:9016-87-9 contains > 0.1% MDI isomers. CAS-nr.:75-28-5 contains < 0,1% 1,3-butadiene. This indicates that the ingredient is neither carcinogenic nor mutagenic. CAS No 9016-87-9 has specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.1% Skin Irrit. 2; H315: C ≥ 5% Eye Irrit. 2; H319: C ≥ 5% STOT SE 3; H335: C ≥ 5%		
Substance comments	CAS-nr: 9016-87-9 is exempted from REACH registration. For substances without REACH registration number, no information has been provided by the subcontractor or manufacturer. See section 16 for explanation of hazard statements (H) listed above.		

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Emergency telephone number: see section 1.4. In case of unconsciousness or severe accidents, call 112.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact	Remove contaminated clothing. Flush skin thoroughly with water. Contact physician.
Eye contact	Remove contact lenses and open eyes wide apart. Promptly rinse eyes with plenty of water (tempered at 20-30°C) for at least 15 minutes. By prolonged rinsing, use luke warm water to avoid damage to the eye. Contact a physician.
Ingestion	Unlikely because of the chemical condition. If the chemical is swallowed in liquid form: Rinse your mouth thoroughly with water. Do not induce vomiting. Call a POISON CENTER or doctor/physician.

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

General symptoms and effects	Isocyanates have a relatively high odour threshold and the odour will only be noticed at relatively high concentrations. Harmful amounts may therefore be inhaled without prior warning.
Acute symptoms and effects	Inhalation: Inhalation of isocyanate vapors can cause shortness of breath, chest discomfort and reduced lung function. May cause an allergic respiratory reaction. Symptoms of hypersensitivity such as asthma, rhinitis (hay fever) or alveolitis can occur.

	Skin contact: The chemical irritates the skin and can cause itching, burning and redness. May cause sensitisation by skin contact. Allergic skin reactions: symptoms may include redness, swelling, blistering and itching. Eye contact: Irritating to eyes and may cause redness and burning. Ingestion: Ingestion may cause discomfort. May cause irritation to the mouth and throat.
Delayed symptoms and effects	Suspected of being able to cause cancer. May cause damage to organs through prolonged or repeated exposure.

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

Other information	Treat symptomatically. No specific information from the manufacturer.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Powder, carbon dioxide (CO ₂), water mist.
Improper extinguishing media	None known.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Extremely flammable aerosol. Can form explosive gas-air mixtures. Vapours are heavier than air and may spread near ground to sources of ignition. Aerosol cans may explode in a fire.
Hazardous combustion products	May develop highly toxic or corrosive fumes if heated. May include, but is not limited to: Carbon dioxide (CO₂). Carbon monoxide (CO). Oxides of phosphorous (PO_x). Oxides of nitrogen (NO_x). Hydrogen chloride (HCl). Hydrogen cyanide (HCN). Isocyanates. Other toxic gases.

5.3. Advice for firefighters

Personal protective equipment	Use compressed air equipment when the chemical is involved in fire. In case of evacuation, an approved protection mask should be used. See also section 8.
Other information	Extinguishing water must not be discharged into drains. Containers close to fire should be removed immediately or cooled with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Keep away from heat / sparks / open flames / hot surfaces. — No smoking.
Personal protection measures	Provide adequate ventilation. Avoid inhalation of vapours and aerosols and contact with skin and eyes. Use protective equipment as referred to in section 8.

6.2. Environmental precautions

Environmental precautionary measures	Do not allow to enter into sewer, water system or soil.
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6.3. Methods and material for containment and cleaning up

Clean up	Aerosol cans are collected mechanically. Content of the spray can: Let spilled chemical harden. Use mechanical handling equipment. Collect in a suitable container and dispose as hazardous waste according to section 13. Wash the contaminated surface with acetone.
Other information	Vapours may form explosive mixtures with air on the ground.

6.4. Reference to other sections

Other instructions	See also sections 8 and 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Avoid direct contact. Provide adequate ventilation. Do not use in confined spaces without adequate ventilation and/or respirator. Avoid inhalation of vapours and aerosols and contact with skin and eyes. Personnel with a history of asthma-type conditions, bronchitis or skin sensitisation conditions should not use this chemical. People with respiratory problems due to isocyanates must not be exposed to vapors from the chemical. Use protective equipment as referred to in section 8.
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Protective safety measures

Safety measures to prevent fire	Do not use near naked flames or glowing materials. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Do not spray on a naked flame or red-hot material. Use explosion-proof electrical / ventilating / lighting / / equipment. Ground / bond container and receiving equipment. Use only non-sparking tools. Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Pressurized container: Do not pierce or burn, even after use.
Advice on general occupational hygiene	Do not eat, drink or smoke during work. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in tightly closed original container in a dry, cool and well-ventilated place.
Conditions to avoid	Protect from sunlight. Avoid heat, flames and other sources of ignition.

Conditions for safe storage

Advice on storage compatability	Keep away from: Strong acids. Strong alkalis. Amines. Food and feed.
Storage temperature	Value: < 50 °C
Storage stability	Maximum storage time: 1 year.

7.3. Specific end use(s)

Specific use(s)	See section 1.2.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Polymethylene polyphenyl isocyanate, conc monomer ≥ 0.1%	CAS No.: 9016-87-9	Limit value (8 h) : 0,005 ppm Limit value (8 h) : 0,05 mg/m³ Exposure limit letter Letter code: A, 4 Comments: NORWEGIAN OEL Limit value (8 h) : 0,002 ppm Limit value (short term) Value: 0,005 ppm Exposure limit letter Letter code: M, S Comments: SWEDISH OEL	
Dimethyl ether	CAS No.: 115-10-6	Limit value (8 h) : 200 ppm Limit value (8 h) : 384 mg/m³ Exposure limit letter Letter code: E Comments: Norwegian OEL Limit value (8 h) : 500 ppm Limit value (8 h) : 950 mg/m³ Limit value (short term) Value: 800 ppm Limit value (short term) Value: 1500 mg/m³ Exposure limit letter Letter code: V Comments: Swedish OEL	
Propane	CAS No.: 74-98-6	Country of origin: NORWEGIAN Limit value (8 h) : 500 ppm Limit value (8 h) : 900 mg/m³	
Control parameters comments	Explanation of the notations: A = Chemicals to be treated as provoking allergic reactions or other hypersensitivity in the eyes or respiratory organs, or to be treated as provoking		

allergic reactions in contact with skin.

E = The EU has an indicative limit value and/or remark for the substance.

4) Korttidsverdien for diisocyanater er 0,01 ppm

S = Sensitizing substances can cause allergies or other hypersensitivity

M = Medical check may be required before handling the substance.

V = The indicative short-term limit should be used as a recommended maximum value that should not be exceeded.

References (laws/regulations):

Norwegian regulation on exposure limits: FOR-2011-12-06-1358 Forskrift om tiltaks- og grenseverdier (sist endret gjennom FOR-2024-04-05-581).

Swedish regulation on exposure limits: Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden, "Hygieniska gränsvärden", AFS 2018:1

DNEL / PNEC

DNEL

Group: Professional

Route of exposure: Long-term inhalation (systemic)

Value: 8,2 mg/m³

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Professional

Route of exposure: Acute inhalation (systemic)

Value: 22,6 mg/m³

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Professional

Route of exposure: Long-term dermal (systemic)

Value: 2,91 mg/kg bw/day

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Consumer

Route of exposure: Long-term inhalation (systemic)

Value: 1,45 mg/m³

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Consumer

Route of exposure: Acute inhalation (systemic)

Value: 5,6 mg/m³

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Consumer

Route of exposure: Long-term dermal (systemic)

Value: 1,04 mg/kg bw/day

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Consumer

Route of exposure: Long-term oral (systemic)

Value: 0,53 mg/kg bw/day

Comments: Applies to CAS-nr: 1244733-77-4.

Group: Consumer

Route of exposure: Acute oral (systemic)

Value: 2 mg/kg bw/day

Comments: Applies to CAS-nr: 1244733-77-4.

PNEC

Route of exposure: Freshwater

Value: 0,32 mg/l
 Comments: Applies to CAS-nr: 1244733-77-4.

Route of exposure: Saltwater
 Value: 0,032 mg/l
 Comments: Applies to CAS-nr: 1244733-77-4.

Route of exposure: Freshwater
 Value: 0,51 mg/l
 Comments: Intermittent release.
 Applies to CAS-nr: 1244733-77-4.

Route of exposure: Sewage treatment plant STP
 Value: 19,1 mg/l
 Comments: Applies to CAS-nr: 1244733-77-4.

Route of exposure: Freshwater sediments
 Value: 11,5 mg/kg dw
 Comments: Applies to CAS-nr: 1244733-77-4.

Route of exposure: Saltwater sediments
 Value: 1,15 mg/kg dw
 Comments: Applies to CAS-nr: 1244733-77-4.

Route of exposure: Soil
 Value: 0,34 mg/kg dw
 Comments: Applies to CAS-nr: 1244733-77-4.

Route of exposure: Food products
 Value: 11,6 mg/kg
 Comments: Applies to CAS-nr: 1244733-77-4.

8.2. Exposure controls

Precautionary measures to prevent exposure

Technical measures to prevent exposure

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. The personal protective equipment must be CE-marked and the latest version of the standards shall be used. The protective equipment and the specified standards recommended below are only suggestions, and should be selected on advice from the supplier of such equipment.

A risk assessment of the work place/work activities (the actual risk) may lead to other control measures. The protection equipment's suitability and durability will depend on application.

Eye / face protection

Eye protection equipment

Description: Wear tight-fitting goggles or face shield.
 Reference to relevant standard: EN ISO 16321-1:2022 (Eye and face protection for occupational use - Part 1: General requirements).

Additional eye protection measures

Eye wash facilities shall be available at the work place. Either a fixed eye wash facility connected to the drinking water (preferably warm water) or a portable disposable unit.

Hand protection

Suitable gloves type	LDPE (Low Density Polyethylene)
Breakthrough time	Value: > 10 minute(s)
Thickness of glove material	Value: 0,025 mm
Hand protection equipment	Description: Use chemical resistant gloves. The gloves abilities may vary among the different glove manufacturers. Reference to relevant standard: EN ISO 374 (Protective gloves against chemicals and micro-organisms). EN ISO 21420:2020 (Protective gloves - General requirements and test methods).
Additional hand protection measures	Replace gloves if signs of wear and tear. Gloves must only be worn on clean, dry hands.

Skin protection

Recommended protective clothing	Description: Wear appropriate protective clothing to protect against possible skin contact. Suit with hood giving complete protection to head, face and neck. Reference to relevant standard: EN 14605 (Protective clothing against liquid chemicals. performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4])). NS-EN 13034 Vernetøy mot flytende kjemikalier. Ytelseskrav til vernetøy som gir begrenset beskyttelse mot flytende kjemikalier (Utstyr type 6 og type PB(6))
Additional skin protection measures	Emergency shower should be available at the workplace.

Respiratory protection

Recommended respiratory protection	Description: Air-supplied mask shall be used when spraying with chemicals containing isocyanates. Use combination filter A/P2 by aerosol formation. Reference to relevant standard: EN 14387 (Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking).
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Appropriate environmental exposure control

Environmental exposure controls	Do not allow to enter into sewer, water system or soil.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Aerosol.
Colour	Varying.
Odour	Characteristic.
pH	Comments: Not relevant. Insoluble in water.
Freezing point	Comments: Not determined.
Boiling point / boiling range	Comments: Not determined.
Flash point	Comments: Not relevant.

Flammability	Extremely flammable aerosol.
Explosion limit	Comments: Not determined.
Vapour pressure	Comments: In the pressure vessel, the steam pressure exceeds 500 kPa. After defoaming, the vapor pressure is very low (not stated).
Vapour density	Value: > 1 Comments: Air=1.
Particle characteristics	Comments: Not relevant.
Relative density	Value: 1,17 Temperature: 20 °C
Density	Value: 1170 kg/m ³ Temperature: 20 °C
Solubility	Medium: Water Comments: Insoluble. Comments: Soluble in organic solvents.
Partition coefficient: n-octanol/ water	Comments: Not relevant for a mixture.
Auto-ignition temperature	Comments: Not determined.
Decomposition temperature	Comments: Not determined.
Viscosity	Comments: Not relevant.

9.2. Other information

Physical hazards

Content of VOC	Value: < 17 % Value: 178 g/l
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	May be ignited by heat, sparks or flames.
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10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reacts violently with acids/bases. Can polymerize with strong bases and amines.
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10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Do not expose to temperatures above 50 °C. Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
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10.5. Incompatible materials

Materials to avoid	Strong acids. Strong bases. Amines.
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10.6. Hazardous decomposition products

Hazardous decomposition products	None under normal conditions. See also section 5.2.
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SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Other toxicological data	Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Oral, LD50, > 10000 mg/kg, rat, literature study, Dermal, LD50, > 5000 mg/kg, rabbit, literature study, Inhalation (vapour), LC50, 11 mg/l, 4 h, Literature study, Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Oral, LD50, EU Method B.1, 632 mg/kg body weight, Rat (female), Experimental value, Skin, LD50, OECD 402, > 2000 mg/kg body weight, 24 hours, rat (male / female), experimental value, Inhalation (aerosol), LC50, OECD 403, > 7 mg/l, 4 h, Rat (male / female), Experimental value.
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Other information regarding health hazards

Assessment of acute toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of skin corrosion / irritation, classification	Irritating to skin.
Assessment of eye damage or irritation, classification	Causes serious eye irritation.
Assessment of respiratory sensitisation, classification	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
Assessment of skin sensitisation, classification	May cause an allergic skin reaction.
General	Corrosive/Irritating Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Eye, Irritant; category 2, Literature study, Skin, Irritant; category 2, Literature study, Inhalation, Irritant; STOT SE cat.3, Literature study, Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Eye, Non-irritant, OECD 405, 24 h, 24; 48; 72 hours, Rabbit, Experimental value, Single treatment with rinsing Skin, Non-irritant, OECD 404, 4 h, 24; 48; 72 hours, rabbit, experimental value, Sensitizing for skin and respiratory tract

	Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Skin, Sensitizing; category 1, Literature study, Inhalation, Sensitizing; category 1, Literature study, Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Skin (on ears), Not sensitizing, OECD 429, Mouse (female), Experimental value, Specific organ toxicity Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Inhalation, STOT RE cat.2, Literature study, Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Oral (diet), NOAEL, Subchronic toxicity test, 171 mg/kg body weight/day, No effect, 13 weeks (daily), Rat (female), Experimental value, Oral (diet), Dose level, Subchronic toxicity test, 52 mg/kg body weight/day, Liver (enlargement/affect of liver), 13 weeks (daily), Rat (male), Experimental value, Mutagenic properties (in vitro) Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Negative without metabolic activation, Positive with metabolic activation, OECD 476, Mouse (lymphoma L5178Y cells), Experimental value, Negative with metabolic activation, negative without metabolic activation, OECD 471, Bacteria (S. typhimurium and E. coli), Experimental value, Mutagenic properties (in vivo) Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Negative (Oral (gastric tube)), Rat (male), No effect, Experimental value, Single treatment Carcinogen Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Unknown, category 2, Literature study, Reproductive toxicity Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Developmental toxicity (Oral (gastric tube)), NOAEL, OECD 414, 500 mg/kg bw/day, 23 days (gestation, daily), Rabbit, Fetus (no effect), Experimental value, Maternal toxicity (Oral (gastric tube)), NOAEL, OECD 414, 500 mg/kg bw/day, 23 days (gestation, daily), Rabbit, No effect, Experimental value, Effects on fertility (Oral (dietary)), LOAEL, OECD 416, 99 mg/kg body weight/day, Rat (male / female), Reproductive performance, Experimental value.
Assessment of germ cell mutagenicity, classification	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	Suspected of causing cancer.
Assessment of reproductive toxicity, classification	Based on available data, the classification criteria are not met.

Assessment of specific target organ toxicity - single exposure, classification	May cause respiratory irritation.
Assessment of specific target organ toxicity - repeated exposure, classification	May cause damage to organs through prolonged or repeated exposure.
Assessment of aspiration hazard, classification	Based on available data, the classification criteria are not met.

Symptoms of exposure

In case of ingestion	Not likely to be ingested. Ingestion may cause discomfort. May cause irritation to the mouth and throat.
In case of skin contact	The chemical irritates the skin and can cause itching, burning and redness. May cause sensitisation by skin contact. Allergic skin reactions: symptoms may include redness, swelling, blistering and itching.
In case of inhalation	Inhalation of isocyanate vapors can cause shortness of breath, chest discomfort and reduced lung function. May cause an allergic respiratory reaction. Symptoms of hypersensitivity such as asthma, rhinitis (hay fever) or alveolitis can occur. Isocyanates have a relatively high odour threshold and the odour will only be noticed at relatively high concentrations. Harmful amounts may therefore be inhaled without prior warning.
In case of eye contact	Irritating to eyes and may cause redness and burning.

11.2 Other information

Endocrine disruption	Contains substances that are suspected of being hormone disruptors. Applies to CAS no: 1244733-77-4 Status "Under development (SEV)"
Other information	Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	The chemical is not classified as harmful to the environment. Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Acute toxicity other aquatic organisms, LC50, > 1000 mg/l, 96 h, Literature study Toxicity aquatic microorganisms, EC50, OECD 209, > 100 mg/l, Activated sludge, Literature study Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Acute toxicity fish, LC50, 56 mg/l, 96 h, Danio rerio, Static system, Fresh water, Experimental value; Nominal concentration Acute toxicity to crustaceans, LC50, 131 mg/l, 48 h, Daphnia magna, Static system, Fresh water, Nominal concentration Toxicity to algae and other aquatic plants, ErC50, OECD 201, 82 mg/l, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value; Nominal concentration NOEC, OECD 201, 13 mg/l, 72 h, Pseudokirchneriella subcapitata, Static system,
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Fresh water, Experimental value; Growth rate
Long-term toxicity aquatic crustacean, NOEC, OECD 202, 32 mg/l, 21 day(s),
Daphnia magna, Semi-static system, Fresh water, Experimental value; GLP.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	Contains components which are not biodegradable. Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 Biological decomposition water, OECD 302C, < 60%, Experimental value Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 Biological decomposition water, EU method C.4-D, 14%; GLP, 28 day(s), experimental value.
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12.3. Bioaccumulative potential

Bioaccumulation, evaluation	The chemical does not contain any substances that are considered bioaccumulative.
Bioaccumulation, comments	Polymethylene polyphenyl isocyanate – CAS no: 9016-87-9 BCF fisker, BCF, 1, Fiskene, Literature study Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 BCF fish, BCF, OECD 305, 0.8 - 14; Fresh, 6 weeks, Cyprinus carpio, Experimental value Log Kow, EU Method A.8, 2.7, 30 °C, Experimental value

12.4. Mobility in soil

Mobility	Insoluble in water. Contains component(s) with the potential for mobility in soil. Contains components that adsorb into soil.
Mobility, comments	Reaction products of phosphoryl trichloride and 2-methyloxirane - CAS no: 1244733-77-4 log Koc, SRC PCKOCWIN v2.0, 3.2, QSAR.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	The chemical contains no PBT or vPvB substances.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	Contains substances that are suspected of being hormone disruptors. Applies to CAS no: 1244733-77-4 Status "Under development (SEV)"
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12.7. Other adverse effects

Ozone depletion potential	Comments: The chemical contains no substances classified as hazardous to the ozone layer.
Additional ecological information	The chemical contains substances known to contribute to the greenhouse effect. Do not allow to enter into sewer, water system or soil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intended as a guide. The code must be chosen by the user, if the use differs from the one mentioned below.
EWC waste code	EWC waste code: 080409 waste adhesives and sealants containing organic solvents or other dangerous substances Classified as hazardous waste: Yes EWC waste code: 080501 waste isocyanates Classified as hazardous waste: Yes EWC waste code: 160504 gases in pressure containers (including halons) containing dangerous substances Classified as hazardous waste: Yes
EWL packing	EWC waste code: 150110 packaging containing residues of or contaminated by dangerous substances Classified as hazardous waste: Yes
NORSAS	7055 Aerosol cans.
Other information	Avoid release to the environment.

SECTION 14: Transport information

Dangerous goods	Yes
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14.1. UN number

ADR/RID/ADN	1950
IMDG	1950
ICAO/IATA	1950

14.2. UN proper shipping name

Proper shipping name English	AEROSOLS
ADR/RID/ADN	AEROSOLS
ADR/RID/ADN	AEROSOLS
IMDG	AEROSOLS
ICAO/IATA	AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR/RID/ADN	2.1
Classification code ADR/RID/ADN	5F

14.4. Packing group

Comments	Not relevant.
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14.5. Environmental hazards

IMDG Marine pollutant	No
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14.6. Special precautions for user

Special safety precautions for user	Combination packaging: no more than 1 liter per inner packaging for liquids. A package must not weigh more than 30 kg (gross mass)
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14.7. Maritime transport in bulk according to IMO instruments

Transport in bulk (yes/no)	No
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Additional information

Hazard label ADR/RID/ADN	2.1
Hazard label IMDG	2.1
Hazard label ICAO/IATA	2.1

ADR/RID Other information

Tunnel restriction code	D
Transport category	2

IMDG Other information

EmS	F-D, S-U
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SECTION 15: Regulatory information

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

Restriction of chemicals according to Annex XVII (REACH)	Contains substances in section 3 which are covered by points 56 & 74 of REACH Annex XVII. Applies to CAS-nr: 9016-87-9.
VOC	VOC percent by weight: < 17 VOC value: 178 g/l
References (laws/regulations)	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP-regulation) with later amendments. Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH Regulation), with later amendments. Norwegian regulation on waste, 01.06.2004 no. 930, with later amendments. Norwegian regulation on dangerous goods: FOR 2009-04-01 nr 384: Forskrift om landtransport av farlig gods med senere endringer, Direktoratet for samfunnssikkerhet og beredskap. Norwegian regulation FOR-1996-03-01 no. 229 with later amendments: Forskrift om aerosolbeholdere.

15.2. Chemical safety assessment

Chemical safety assessment performed	No
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SECTION 16: Other information

Supplier's notes	The information contained in this SDS must be made available to all those who handle the product.
List of relevant H-phrases (Section 2 and 3)	H220 Extremely flammable gas. H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated. 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 H412 Harmful to aquatic life with long lasting effects.
CLP classification, comments	Aerosol 1; H222, H229; test Other hazard classes: Calculation method.
Key literature references and sources for data	Suppliers Safety data sheet dated: 31.01.2024.
Abbreviations and acronyms used	ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road BCF: Bio Concentration Factor DNEL: Derived No Effect Level EWC: European Waste Code (a code from the EU's common classification system for waste) EC50: The effective concentration of substance that causes 50% of the maximum response ErC50: ErC50 means EC50 in terms of reduction of growth rate, (ErC50 = EC50(growth rate)) IATA: The International Air Transport Association ICAO: The International Civil Aviation Organisation IMDG: The International Maritime Dangerous Goods Code IMO: International Maritime Organization LC50: Median concentration lethal to 50% of a test population. LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%. NOEC: No observed effect concentration OECD: Organisation for Economic Cooperation and Development. PBT: Persistent, Bioaccumulative and Toxic PNEC: Predicted No Effect Concentration RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail VOC: Volatile Organic Compounds vPvB: very Persistent and very Bioaccumulative
Information added, deleted or revised	Sections that have changed from the previous version: 1-16.

Checking quality of information	This SDS is quality controlled by Kiwa Kompetanse AS in Norway, certified according to the Quality Management System requirements specified in ISO 9001:2015.
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