

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

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

#### 1.1 Product identifier

Trade name : PURlogic FLEX - 500 ML  
Product code : 08921428

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

Use of the Sub- : Sealant  
stance/Mixture : Professional use product

#### 1.3 Details of the supplier of the safety data sheet

Company : Adolf Wuerth GmbH & Co. KG  
Reinhold-Würth-Str. 12-17  
74653 Künzelsau  
  
Telephone : +49 794015 0  
  
Telefax : +49 794015 10 00  
  
E-mail address of person : prodsafe@wuerth.com  
responsible for the SDS

#### 1.4 Emergency telephone number

+49 (0)6132 – 84463

---

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Specific target organ toxicity - single exposure, Category 3	H335: May cause respiratory irritation.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - repeated	H373: May cause damage to organs through pro-

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

exposure, Category 2	longed or repeated exposure.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin irritation, Category 2	H315: Causes skin irritation.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H222 Extremely flammable aerosol.
- H229 Pressurised container: May burst if heated.
- H302 + H332 Harmful if swallowed or if inhaled.
- 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.

Precautionary statements : **Prevention:**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### **Response:**

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

#### **Storage:**

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

#### **Hazardous components which must be listed on the label:**

Diphenylmethane diisocyanate, isomers and homologues  
Phosphorous oxychloride, reaction products with propylene oxide  
4,4'-Diphenylmethane diisocyanate  
Diethylene glycol

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

### 2.3 Other hazards

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Diphenylmethane diisocyanate, isomers and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373 (Respiratory Tract)	>= 30 - < 50
Phosphorous oxychloride, reaction products with propylene oxide	Not Assigned 911-815-4 01-2119486772-26	Acute Tox. 4; H302	>= 20 - < 30
4,4'-Diphenylmethane diisocyanate	101-68-8 202-966-0 615-005-00-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373 (Respiratory Tract)	>= 5 - < 10
Dimethyl ether	115-10-6 204-065-8 603-019-00-8 01-2119472128-37	Flam. Gas 1A; H220 Press. Gas Liquefied gas; H280 STOT SE 3; H336	>= 1 - < 10
Diethylene glycol	111-46-6 203-872-2 603-140-00-6 01-2119457857-21	Acute Tox. 4; H302	>= 1 - < 10

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.

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

- Risks : Harmful if swallowed or if inhaled.  
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.
- Respiratory symptoms, including pulmonary edema, may be delayed.  
Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

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

- Treatment : Treat symptomatically and supportively.

---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Alcohol-resistant foam

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Water spray in large fire situations

Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
Exposure to combustion products may be a hazard to health.  
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Isocyanates  
Hydrogen cyanide (hydrocyanic acid)  
Chlorine compounds  
Oxides of phosphorus

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

---

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.  
Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

### 6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.  
Soak up with inert absorbent material.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
After approximately one hour, transfer to waste container and do not seal, due to evolution of carbon dioxide.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.  
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Do not breathe spray.  
Do not swallow.  
Do not get in eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Keep away from water.  
Protect from moisture.  
Already sensitised individuals should consult their physician regarding working with respiratory irritants or sensitisers.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Take precautionary measures against static discharges.  
Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

environment.  
Do not spray on an open flame or other ignition source.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store locked up. Protect from moisture. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not pierce or burn, even after use. Keep cool. Protect from sunlight.

Advice on common storage : Do not store with the following product types:  
Self-reactive substances and mixtures  
Organic peroxides  
Oxidizing agents  
Flammable solids  
Pyrophoric liquids  
Pyrophoric solids  
Self-heating substances and mixtures  
Substances and mixtures, which in contact with water, emit flammable gases  
Explosives

Storage class (TRGS 510) : 2B, Aerosol cans and lighters

Storage period : 12 Months

Recommended storage temperature : > 0 - 40 °C

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
	Further information: For the two core content the limit values of the single isomers apply (4,4'-MDI, 2,4'-MDI, 2,2'-MDI); for the homologue content use the exposure assessment value (as indicated by the manufacturer).			
Diphenylmethane diisocyanate, isomers and homologues	9016-87-9	AGW (Inhalable fraction)	0,05 mg/m <sup>3</sup> (MDI)	DE TRGS 900

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

	Peak-limit: excursion factor (category): 1;=2=(I)			
	Further information: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The exposure limit is established for monomers. For regulatory details on oligomers and polymers see TRGS 430 'Isocyanate'., Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin and respiratory system			
4,4'-Diphenylmethane diisocyanate	101-68-8	AGW (Vapour and aerosols)	0,05 mg/m3	TRGS 430
	Peak-limit: excursion factor (category): 1;=2=(I)			
	Further information: airway sensitizing substance			
		AGW (Vapour and aerosols, inhalable fraction)	0,05 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 1;=2=(I)			
	Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin and respiratory system			
Dimethyl ether	115-10-6	TWA	1.000 ppm 1.920 mg/m3	2000/39/EC
	Further information: Indicative			
		AGW	1.000 ppm 1.900 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 8;(II)			
	Further information: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., European Union (The EU has established a limit value: deviations in value and peak limit are possible)			
Isobutane	75-28-5	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 4;(II)			
	Further information: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
Propane	74-98-6	AGW	1.000 ppm 1.800 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 4;(II)			
	Further information: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
Diethylene glycol	111-46-6	AGW (Vapour and aerosols)	10 ppm 44 mg/m3	DE TRGS 900
	Peak-limit: excursion factor (category): 4;(II)			
	Further information: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., Sum of vapor and aerosols., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Formaldehyde	50-00-0	AGW	0,3 ppm	DE TRGS



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
 Date of first issue: 15.03.2012

			0,37 mg/m <sup>3</sup>	900
	Peak-limit: excursion factor (category): 2;(I)			
	Further information: Carcinogenic substance Cat. 1A or 1B or carcinogenic activity or procedure according to § 2 (3) No. 4 of the Hazardous Substances Ordinance - in addition, § 10 GefStoffV must be observed, Commission for dangerous substances, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child, Substance sensitizing through the skin			
		STEL	0,6 ppm 0,74 mg/m <sup>3</sup>	2004/37/EC
	Further information: Dermal sensitisation, Carcinogens or mutagens			
		TWA	0,3 ppm 0,37 mg/m <sup>3</sup>	2004/37/EC
	Further information: Dermal sensitisation, Carcinogens or mutagens			
Methanol	67-56-1	TWA	200 ppm 260 mg/m <sup>3</sup>	2006/15/EC
	Further information: Indicative, Identifies the possibility of significant uptake through the skin			
		AGW	100 ppm 130 mg/m <sup>3</sup>	DE TRGS 900
	Peak-limit: excursion factor (category): 2;(II)			
	Further information: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., European Union (The EU has established a limit value: deviations in value and peak limit are possible), Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
4,4'-Diphenylmethane diisocyanate	Workers	Inhalation	Long-term local effects	0,05 mg/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	0,1 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term local effects	0,025 mg/m <sup>3</sup>
Dimethyl ether	Consumers	Inhalation	Acute local effects	0,05 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term systemic effects	1894 mg/m <sup>3</sup>
Poly(PO) Glycerine Ether	Consumers	Inhalation	Long-term systemic effects	471 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term systemic effects	98 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	13,9 mg/kg bw/day
Diethylene glycol	Workers	Skin contact	Long-term systemic effects	8,3 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	44 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	60 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	43 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic	12 mg/m <sup>3</sup>

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

**PURlogic FLEX - 500 ML**Version  
10.0Revision Date:  
22.12.2020SDS Number:  
551412-00008Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

			effects	
	Consumers	Inhalation	Long-term local effects	12 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	21 mg/kg bw/day
Phosphorous oxychloride, reaction products with propylene oxide	Workers	Inhalation	Long-term systemic effects	8,2 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	22,6 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	2,91 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,45 mg/m <sup>3</sup>
	Consumers	Inhalation	Acute systemic effects	5,6 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	1,04 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,52 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	2 mg/kg bw/day

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

Substance name	Environmental Compartment	Value
4,4'-Diphenylmethane diisocyanate	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Intermittent use/release	10 mg/l
	Sewage treatment plant	1 mg/l
	Soil	1 mg/kg
Dimethyl ether	Fresh water	0,155 mg/l
	Marine water	0,016 mg/l
	Intermittent use/release	1,549 mg/l
	Sewage treatment plant	160 mg/l
	Fresh water sediment	0,681 mg/kg dry weight (d.w.)
	Marine sediment	0,069 mg/kg dry weight (d.w.)
	Soil	0,045 mg/kg dry weight (d.w.)
Poly(PO) Glycerine Ether	Fresh water	0,2 mg/l
	Marine water	0,02 mg/l
	Intermittent use/release	1 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	0,52 mg/kg
	Marine sediment	0,052 mg/kg
	Soil	0,067 mg/kg
Diethylene glycol	Fresh water	10 mg/l
	Marine water	1 mg/l
	Freshwater - intermittent	10 mg/l
	Sewage treatment plant	199,5 mg/l
	Fresh water sediment	20,9 mg/kg dry

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

		weight (d.w.)
	Soil	1,53 mg/kg dry weight (d.w.)
	Marine sediment	2,09 mg/kg dry weight (d.w.)
Phosphorous oxychloride, reaction products with propylene oxide	Fresh water	0,32 mg/l
	Freshwater - intermittent	0,51 mg/l
	Marine water	0,032 mg/l
	Sewage treatment plant	19,1 mg/l
	Fresh water sediment	11,5 mg/kg dry weight (d.w.)
	Marine sediment	1,15 mg/kg dry weight (d.w.)
	Soil	0,34 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	11,6 mg/kg food

### 8.2 Exposure controls

#### Engineering measures

Processing may form hazardous compounds (see section 10).

Minimize workplace exposure concentrations.

If sufficient ventilation is unavailable, use with local exhaust ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

#### Personal protective equipment

Eye protection : Wear the following personal protective equipment:  
Safety goggles  
Equipment should conform to DIN EN 166

#### Hand protection

Material : Polyethylene  
Break through time : 10 min  
Glove thickness : 0,025 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Wear the following personal protective equipment:  
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.  
Skin contact must be avoided by using impervious protective

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to DIN EN 137

Filter type : Self-contained breathing apparatus

---

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance : aerosol

Propellant : Isobutane, Dimethyl ether, Propane

Colour : coloured

Odour : characteristic

Odour Threshold : No data available

pH : substance/mixture is non-soluble (in water)

Melting point/freezing point : No data available

Initial boiling point and boiling range : Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : Not applicable

Relative vapour density : > 1

Relative density : 0,9 (20 °C)

Density : 0,9 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : insoluble

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

Solubility in other solvents : soluble  
Solvent: organic solvents

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Particle size : Not applicable

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions.

Polymerises at high temperatures with evolution of carbon dioxide.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Extremely flammable aerosol.  
Vapours may form explosive mixture with air.  
Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate.  
Exothermic reaction with acids, amines and alcohols  
Reacts with water to form carbon dioxide and heat  
Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea.  
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.  
Hazardous decomposition products will be formed upon contact with water or humid air.  
Hazardous decomposition products will be formed at elevated temperatures.

### 10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture  
Heat, flames and sparks.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents  
Acids  
Bases  
Water  
Alcohols  
Amines  
Ammonia  
Aluminium  
Zinc  
Brass  
Tin  
Copper  
Galvanised metals  
Humid air

### 10.6 Hazardous decomposition products

Thermal decomposition : Formaldehyde  
Methanol

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Harmful if swallowed or if inhaled.

#### Product:

Acute oral toxicity : Acute toxicity estimate: 1.976 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 3,19 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

#### Components:

#### Diphenylmethane diisocyanate, isomers and homologues:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2,24 mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### **Phosphorous oxychloride, reaction products with propylene oxide:**

Acute oral toxicity : LD50 (Rat): 500 - 2.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **4,4'-Diphenylmethane diisocyanate:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 2,24 mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg  
Remarks: Based on data from similar materials

### **Dimethyl ether:**

Acute inhalation toxicity : LC50 (Rat): 164000 ppm  
Exposure time: 4 h  
Test atmosphere: gas

### **Diethylene glycol:**

Acute oral toxicity : Acute toxicity estimate (Humans): 1.120 mg/kg  
Method: Expert judgement

### **Skin corrosion/irritation**

Causes skin irritation.

### **Components:**

#### **Diphenylmethane diisocyanate, isomers and homologues:**

Species : Rabbit  
Result : Skin irritation

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

### **Phosphorous oxychloride, reaction products with propylene oxide:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

### **4,4'-Diphenylmethane diisocyanate:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation  
Remarks : Based on data from similar materials

### **Diethylene glycol:**

Species : Rabbit  
Result : No skin irritation

### **Serious eye damage/eye irritation**

Causes serious eye irritation.

### **Components:**

#### **Diphenylmethane diisocyanate, isomers and homologues:**

Result : Irritation to eyes, reversing within 7 days

### **Phosphorous oxychloride, reaction products with propylene oxide:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : No eye irritation

### **4,4'-Diphenylmethane diisocyanate:**

Result : Irritation to eyes, reversing within 7 days  
Remarks : Based on harmonised classification in EU regulation 1272/2008, Annex VI

### **Diethylene glycol:**

Species : Rabbit  
Result : No eye irritation

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

May cause an allergic skin reaction.

#### **Respiratory sensitisation**

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

### **Components:**

#### **Diphenylmethane diisocyanate, isomers and homologues:**

Test Type : Buehler Test  
Exposure routes : Skin contact



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

Species : Guinea pig  
Result : positive  
Remarks : Based on data from similar materials

Assessment : Probability or evidence of skin sensitisation in humans

Exposure routes : inhalation (dust/mist/fume)  
Species : Rat  
Result : positive

Assessment : Probability of respiratory sensitisation in humans based on animal testing

### **Phosphorous oxychloride, reaction products with propylene oxide:**

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : negative

### **4,4'-Diphenylmethane diisocyanate:**

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : positive

Assessment : Probability or evidence of skin sensitisation in humans

Exposure routes : Inhalation  
Species : Rat  
Result : positive  
Remarks : Based on data from similar materials

Assessment : Probability of respiratory sensitisation in humans based on animal testing

### **Diethylene glycol:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : Directive 67/548/EEC, Annex V, B.6.  
Result : negative

### **Germ cell mutagenicity**

Not classified based on available information.

### **Components:**

#### **Diphenylmethane diisocyanate, isomers and homologues:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: inhalation (dust/mist/fume)  
Method: OECD Test Guideline 474  
Result: negative

### Phosphorous oxychloride, reaction products with propylene oxide:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Method: OECD Test Guideline 482  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

### 4,4'-Diphenylmethane diisocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: inhalation (dust/mist/fume)  
Method: OECD Test Guideline 474  
Result: negative

### Dimethyl ether:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in *Drosophila melanogaster* (in vivo)  
Application Route: inhalation (gas)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

Result: negative

### Diethylene glycol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-  
malian cells  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

### Carcinogenicity

Suspected of causing cancer.

### Components:

#### Diphenylmethane diisocyanate, isomers and homologues:

Species : Rat  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 2 Years  
Result : positive

Carcinogenicity - Assess- : Limited evidence of carcinogenicity in animal studies  
ment

#### 4,4'-Diphenylmethane diisocyanate:

Species : Rat  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 2 Years  
Result : positive  
Remarks : Based on data from similar materials

Carcinogenicity - Assess- : Limited evidence of carcinogenicity in animal studies  
ment

### Dimethyl ether:

Species : Rat  
Application Route : inhalation (vapour)  
Exposure time : 2 Years  
Result : negative

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

### Diethylene glycol:

Species : Rat  
Application Route : Ingestion  
Exposure time : 108 weeks  
Result : negative

### Reproductive toxicity

Not classified based on available information.

### Components:

#### Diphenylmethane diisocyanate, isomers and homologues:

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (dust/mist/fume)  
Result: negative

#### Phosphorous oxychloride, reaction products with propylene oxide:

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 416  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rabbit  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative

#### 4,4'-Diphenylmethane diisocyanate:

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (dust/mist/fume)  
Result: negative  
Remarks: Based on data from similar materials

#### Dimethyl ether:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (vapour)  
Result: negative

#### Diethylene glycol:

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Mouse  
Application Route: Ingestion  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rabbit  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative

### STOT - single exposure

May cause respiratory irritation.

#### Components:

#### Diphenylmethane diisocyanate, isomers and homologues:

Assessment : May cause respiratory irritation.

#### 4,4'-Diphenylmethane diisocyanate:

Assessment : May cause respiratory irritation.

#### Dimethyl ether:

Assessment : May cause drowsiness or dizziness.

### STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### Components:

#### Diphenylmethane diisocyanate, isomers and homologues:

Exposure routes : inhalation (dust/mist/fume)  
Target Organs : Respiratory Tract  
Assessment : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

#### Phosphorous oxychloride, reaction products with propylene oxide:

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

#### 4,4'-Diphenylmethane diisocyanate:

Exposure routes : inhalation (dust/mist/fume)  
Target Organs : Respiratory Tract  
Assessment : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

### Repeated dose toxicity

#### Components:

##### **Diphenylmethane diisocyanate, isomers and homologues:**

Species : Rat  
NOAEL : 1.4 mg/m<sup>3</sup>  
LOAEL : 4.1 mg/m<sup>3</sup>  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 13 Weeks

##### **Phosphorous oxychloride, reaction products with propylene oxide:**

Species : Rat  
LOAEL : 52 mg/kg  
Application Route : Ingestion  
Exposure time : 13 Weeks

##### **4,4'-Diphenylmethane diisocyanate:**

Species : Rat  
NOAEL : 0,2 mg/m<sup>3</sup>  
LOAEL : 1 mg/m<sup>3</sup>  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 2 yr  
Remarks : Based on data from similar materials

##### **Dimethyl ether:**

Species : Rat  
NOAEL : 47,11 mg/l  
Application Route : inhalation (vapour)  
Exposure time : 2 yr

##### **Diethylene glycol:**

Species : Rat  
NOAEL : 300 mg/kg  
Application Route : Ingestion  
Exposure time : 98 Days

Species : Dog  
NOAEL : 2.220 mg/kg  
Application Route : Skin contact  
Exposure time : 4 Weeks  
Method : OECD Test Guideline 410  
Remarks : Based on data from similar materials

##### **Aspiration toxicity**

Not classified based on available information.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Components:

##### **Diphenylmethane diisocyanate, isomers and homologues:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1.000 mg/l  
Exposure time: 96 h
- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 1.640 mg/l  
Exposure time: 72 h
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 10 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

##### **Phosphorous oxychloride, reaction products with propylene oxide:**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 51 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 131 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 82 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- EC10 (Pseudokirchneriella subcapitata (green algae)): 42 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC50 : 784 mg/l  
Exposure time: 3 h  
Method: ISO 8192
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 32 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

##### **4,4'-Diphenylmethane diisocyanate:**

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 3.000 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 129,7 mg/l  
Exposure time: 24 h  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic : EC50 (Desmodesmus subspicatus (green algae)): > 1.640

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

plants      mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 1.640 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity to microorganisms      :      EC50 : > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

Toxicity to daphnia and other      :      NOEC: 10 mg/l  
aquatic invertebrates (Chronic toxicity)      Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials

### Dimethyl ether:

Toxicity to fish      :      LC50 (Poecilia reticulata (guppy)): > 4.100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other      :      EC50 (Daphnia magna (Water flea)): > 4.400 mg/l  
aquatic invertebrates      Exposure time: 48 h

Toxicity to microorganisms      :      EC10 (Pseudomonas putida): > 1.600 mg/l

### Diethylene glycol:

Toxicity to fish      :      LC50 (Pimephales promelas (fathead minnow)): 75.200 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other      :      EC50 (Daphnia magna (Water flea)): > 10.000 mg/l  
aquatic invertebrates      Exposure time: 24 h  
Method: DIN 38412

Toxicity to algae/aquatic      :      NOEC (Pseudokirchneriella subcapitata (green algae)): > 1  
plants      mg/l  
Exposure time: 72 h  
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity)      :      NOEC: > 1 mg/l  
Exposure time: 7 d  
Species: Pimephales promelas (fathead minnow)  
Remarks: Based on data from similar materials

Toxicity to daphnia and other      :      NOEC: > 1 mg/l  
aquatic invertebrates (Chronic toxicity)      Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Remarks: Based on data from similar materials



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

### 12.2 Persistence and degradability

#### Components:

##### **Diphenylmethane diisocyanate, isomers and homologues:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d

##### **Phosphorous oxychloride, reaction products with propylene oxide:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 14 %  
Exposure time: 28 d  
Method: Directive 67/548/EEC Annex V, C.4.D.

##### **4,4'-Diphenylmethane diisocyanate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 302  
Remarks: Based on data from similar materials

##### **Dimethyl ether:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

##### **Diethylene glycol:**

Biodegradability : Result: Readily biodegradable.

### 12.3 Bioaccumulative potential

#### Components:

##### **Phosphorous oxychloride, reaction products with propylene oxide:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 0,8 - 14

Partition coefficient: n-octanol/water : log Pow: 2,68

##### **4,4'-Diphenylmethane diisocyanate:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 200

Partition coefficient: n-octanol/water : log Pow: 4,51

##### **Dimethyl ether:**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

---

Partition coefficient: n-octanol/water : log Pow: 0,2

### Diethylene glycol:

Partition coefficient: n-octanol/water : log Pow: -1,98  
Remarks: Calculation

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

No data available

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Product : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product. Please ensure aerosol cans are sprayed completely empty (including propellant)
- Waste Code : The following Waste Codes are only suggestions:
- 08 05 01, waste isocyanates  
16 05 04, gases in pressure containers (including halons) containing hazardous substances
- 08 05 01, waste isocyanates  
16 05 04, gases in pressure containers (including halons) containing hazardous substances
- 15 01 10, packaging containing residues of or contaminated by hazardous substances

---

## SECTION 14: Transport information

### 14.1 UN number

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

**ADN** : UN 1950  
**ADR** : UN 1950  
**RID** : UN 1950  
**IMDG** : UN 1950  
**IATA** : UN 1950

### 14.2 UN proper shipping name

**ADN** : AEROSOLS  
**ADR** : AEROSOLS  
**RID** : AEROSOLS  
**IMDG** : AEROSOLS  
**IATA** : Aerosols, flammable

### 14.3 Transport hazard class(es)

**ADN** : 2  
**ADR** : 2  
**RID** : 2  
**IMDG** : 2.1  
**IATA** : 2.1

### 14.4 Packing group

**ADN**  
Packing group : Not assigned by regulation  
Classification Code : 5F  
Labels : 2.1

**ADR**  
Packing group : Not assigned by regulation  
Classification Code : 5F  
Labels : 2.1  
Tunnel restriction code : (D)

**RID**  
Packing group : Not assigned by regulation  
Classification Code : 5F  
Hazard Identification Number : 23  
Labels : 2.1

**IMDG**  
Packing group : Not assigned by regulation  
Labels : 2.1  
EmS Code : F-D, S-U

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

Labels : Flammable Gas

### IATA (Passenger)

Packing instruction (passenger aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation  
Labels : Flammable Gas

### 14.5 Environmental hazards

#### ADN

Environmentally hazardous : no

#### ADR

Environmentally hazardous : no

#### RID

Environmentally hazardous : no

#### IMDG

Marine pollutant : no

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Diphenylmethane diisocyanate, isomers and homologues (Number on list 56)  
4,4'-Diphenylmethane diisocyanate (Number on list 56)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

---

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P3a	FLAMMABLE AEROSOLS	150 t	500 t
18	Liquefied extremely flammable gases (including LPG) and natural gas	50 t	200 t

Water contaminating class (Germany) : WGK 1 slightly hazardous to water  
Classification according to AwSV, Annex 1 (5.2)

|| Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 17 %, <= 167,46 g/l  
Remarks: VOC content excluding water

### Other regulations:

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

TRGS 430 (German regulatory requirements)

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

---

## SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

### Full text of H-Statements

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.  
H336 : May cause drowsiness or dizziness.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version	Revision Date:	SDS Number:	Date of last issue: 14.12.2020
10.0	22.12.2020	551412-00008	Date of first issue: 15.03.2012

H351 : Suspected of causing cancer.  
H373 : May cause damage to organs through prolonged or repeated exposure if inhaled.

### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Carc. : Carcinogenicity  
Eye Irrit. : Eye irritation  
Flam. Gas : Flammable gases  
Press. Gas : Gases under pressure  
Resp. Sens. : Respiratory sensitisation  
Skin Irrit. : Skin irritation  
Skin Sens. : Skin sensitisation  
STOT RE : Specific target organ toxicity - repeated exposure  
STOT SE : Specific target organ toxicity - single exposure  
2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values  
2004/37/EC : Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work  
2006/15/EC : Europe. Indicative occupational exposure limit values  
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.  
TRGS 430 : Germany. TRGS 430 - Isocyanates  
2000/39/EC / TWA : Limit Value - eight hours  
2004/37/EC / STEL : Short term exposure limit  
2004/37/EC / TWA : Long term exposure limit  
2006/15/EC / TWA : Limit Value - eight hours  
DE TRGS 900 / AGW : Time Weighted Average  
TRGS 430 / AGW : Occupational Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## PURlogic FLEX - 500 ML

Version 10.0      Revision Date: 22.12.2020      SDS Number: 551412-00008      Date of last issue: 14.12.2020  
Date of first issue: 15.03.2012

tative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

### Classification of the mixture:

Aerosol 1	H222, H229
STOT SE 3	H335
Acute Tox. 4	H302
Acute Tox. 4	H332
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT RE 2	H373
Eye Irrit. 2	H319
Skin Irrit. 2	H315

### Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

DE / EN