

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.10.2016

Version number 4

Revision: 28.04.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking*** 1.1 Product identifier***** Trade name PUR TOP M PLUS***** Article number:** 0000673503*** 1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

*** Application of the substance / the mixture** Sealing*** 1.3 Details of the supplier of the safety data sheet***** Manufacturer/Supplier:**

Remmers GmbH
Postfach 1255
D-49624 Lönningen / Germany
Tel.: +49(0)5432/83-0
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Remmers (UK) Limited
Unit B1 The Fleming Centre
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*** Informing department:**

Product Safety department: Tel.: Steve Dunn Tel.: +44 (0) 1293 594 010
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*** 1.4 Emergency telephone number:**

during working hours:

U.K.: Tel.: +44 (0) 1293 594 010

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24h-Transport Emergency Contact Phone Number:

within USA and Canada: 1-800-424-9300

outside USA and Canada: 001-703-527-3887

SECTION 2: Hazards identification*** 2.1 Classification of the substance or mixture***** Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4 H332 Harmful if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Repr. 1A H360D May damage the unborn child.
STOT SE 3 H335 May cause respiratory irritation.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

*** Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

not applicable

Xn; Harmful

R20: Harmful by inhalation.

Xi; Irritant

R37: Irritating to respiratory system.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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*** Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

*** Classification system:**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

*** 2.2 Label elements**

*** Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

*** Hazard pictograms**



GHS07 GHS08

*** Signal word Danger**

*** Hazard-determining components of labelling:**

aliphatic polyisocyanate
dibutyltin dilaurate
aliphatic polyisocyanate
N-methyl-2-pyrrolidone

*** Hazard statements**

H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
H360D May damage the unborn child.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

*** Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Additional information:**

EUH204 Contains isocyanates. May produce an allergic reaction.
Restricted to professional users.

*** 2.3 Other hazards**

*** Results of PBT and vPvB assessment**

* **PBT:** Not applicable.

* **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

*** 3.2 Chemical characterisation: Mixtures**

* **Description:** Mixture of the substances listed below with harmless additions.

*** Dangerous components:**

EC number: 931-274-8	aliphatic polyisocyanate	60-80%
Reg.nr.: 01-2119485796-17-XXXX	Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
EC number: 939-340-8	aliphatic polyisocyanate	10-20%
Reg.nr.: 01-2119970543-34-XXXX	Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	

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CAS: 5493-45-8 EINECS: 226-826-3	bis(2,3-epoxypropyl)cyclohexane-1,2-dicarboxylate Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	2.5-5%
CAS: 872-50-4 EINECS: 212-828-1 Index number: 606-021-00-7 Reg.nr.: 01-2119472430-46-XXXX	N-methyl-2-pyrrolidone Repr. 1B, H360D; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	1-2.5%
CAS: 104810-48-2	poly(oxy-1,2-ethanediyl), α -[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]- ω -hydroxy- Aquatic Chronic 2, H411; Skin Sens. 1, H317	1-2.5%
CAS: 104810-47-1	poly(oxy-1,2-ethanediyl), α -[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]- ω -[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]- Aquatic Chronic 2, H411; Skin Sens. 1, H317	1-2.5%
CAS: 77-58-7 EINECS: 201-039-8 Reg.nr.: 01-2119496068-27-XXXX	dibutyltin dilaurate Muta. 2, H341; Repr. 1A, H360; STOT RE 1, H372; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	\leq 0.5%
CAS: 41556-26-7 EINECS: 255-437-1	Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacat Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	\leq 0.5%
CAS: 82919-37-7 EINECS: 280-060-4	methyl 1,2,2,6,6-pentamethyl-4-piperidylsebacate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	\leq 0.5%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37-XXXX	hexamethylene diisocyanate Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	\leq 0.1%

* **SVHC**

CAS: 872-50-4 N-methyl-2-pyrrolidone

* **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

* **4.1 Description of first aid measures*** **General information**

If symptoms occur or in case of doubt, seek medical attention. In case of unconsciousness, do not administer anything orally.

* **After inhalation**

Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

* **After skin contact**

If skin irritation continues, consult a doctor.

Wash immediately with water and soap and rinse thoroughly.

* **After eye contact** Rinse opened eye for several minutes under running water.* **After swallowing** Drink plenty of water and provide fresh air. Call a doctor immediately.* **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

symptomatic treatment

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SECTION 5: Firefighting measures

* 5.1 Extinguishing media

* Suitable extinguishing agents

Carbon dioxide

Foam

Fire-extinguishing powder

For larger fires also sprayed water.

Use fire fighting measures that suit the environment.

* 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

* 5.3 Advice for firefighters

* Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

Put on breathing apparatus.

* Additional information

Cool endangered containers with water spray jet.

Collect contaminated fire fighting water separately. It must not enter drains.

Ensure adequate means of retaining the water used for extinguishing

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

* 6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources

Ensure adequate ventilation

* 6.2 Environmental precautions:

Do not allow to enter the ground/soil.

Inform responsible authorities in case product reaches bodies of water or sewage system.

Dilute with plenty of water.

* 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

* 6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

* 7.1 Precautions for safe handling

Use only in well ventilated areas.

Ensure good ventilation, if necessary extract air in work places.

Ensure good ventilation/exhaust in workplaces.

Avoid the formation of aerosols.

* Information about protection against explosions and fires:

Fumes can combine with air to form an explosive mixture.

* 7.2 Conditions for safe storage, including any incompatibilities

* Storage

* Requirements to be met by storerooms and containers:

Store only in the original container.

Prevent any penetration into the ground.

* Information on storage in a common storage facility: none

* Further information about storage conditions:

Store container in a well ventilated position.

Protect from humidity and keep away from water.

Protect from frost.

Keep container tightly closed.

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* **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

* **Additional information about design of technical systems:** Use only in well-ventilated areas.

* **8.1 Control parameters**

* **Components with limit values that require monitoring at the workplace:**

CAS: 872-50-4 N-methyl-2-pyrrolidone

WEL Short-term value: 80 mg/m³, 20 ppm

Long-term value: 40 mg/m³, 10 ppm

Sk

CAS: 77-58-7 dibutyltin dilaurate

WEL Short-term value: 0.2 mg/m³

Long-term value: 0.1 mg/m³

as Sn; Sk

CAS: 822-06-0 hexamethylene diisocyanate

WEL Short-term value: 0.07 mg/m³

Long-term value: 0.02 mg/m³

Sen; as -NCO

* **Additional information:** The lists that were valid during compilation were used as a basis.

* **8.2 Exposure controls**

* **Personal protective equipment**

* **General protective and hygienic measures**

Use skin protection cream for preventive skin protection.

The handling of this product is not recommended for persons with respiratory system and skin hypersensitivity (asthma, chronic bronchitis, chronic skin disease).

Keep away from food, beverages and animal feed.

Immediately remove soiled, saturated clothing.

Wash hands before pauses and after work.

* **Respiratory equipment:**

Short term filter device:

Filter A/P2.

In case of brief exposure or low pollution load, use respiratory protection equipment with filter. In case of intensive or longer exposure, use self-contained respiratory protection equipment.

* **Protection of hands:**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

* **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

* **Penetration time of glove material**

Break through time: max. 240 min (DIN EN 374).

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

* **Eye protection:** Face protection

* **Body protection:** Protective work clothing.

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SECTION 9: Physical and chemical properties

* 9.1 Information on basic physical and chemical properties

* General Information

* Appearance:

Form: Liquid
Colour: According to product specification

* **Odour:** Characteristic

* **Odour threshold:** Not determined.

* **pH-value:** Not determined.

* Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

* **Flash point:** 180 °C

* **Inflammability (solid, gaseous)** Not applicable.

* **Ignition temperature:** not applicable

* **Decomposition temperature:** Not determined.

* **Self-inflammability:** Product is not self-igniting.

* **Danger of explosion:** Product is not explosive.

* Explosive Limits:

Lower: Not determined.

Upper: Not determined.

* **Vapour pressure:** Not determined.

* **Density at 20 °C** 1.165 g/cm³

* **Relative density** Not determined.

* **Vapour density** Not determined.

* **Evaporation rate** Not determined.

* Solubility in / Miscibility with

Water: Fully miscible

* **Distribution coefficient (n-octanol/water):** Not determined.

* Viscosity:

dynamic: Not determined.

kinematic: Not determined.

* **Solvent separation test** < 3 %

* **Solid content:** 37.3 %

* **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

* **10.1 Reactivity** No further relevant information available.

* 10.2 Chemical stability

* Thermal decomposition / conditions to be avoided:

No decomposition if handled and stored according to specifications.

* 10.3 Possibility of hazardous reactions

Exothermic reaction with amines and alcohols.

With water carbon dioxide development, pressure build-up in closed containers.

Danger of bursting

* **10.4 Conditions to avoid** No further relevant information available.

* 10.5 Incompatible materials:

Amines

Alcohols

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* **10.6 Hazardous decomposition products:**

None if used properly.
None if stored properly.

* **SECTION 11: Toxicological information**

* **11.1 Information on toxicological effects**

* **Acute toxicity:**

Harmful if inhaled.

* **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral LD50 13333 mg/kg

Inhalative LC50/4 h 12.1 mg/l

CAS: 77-58-7 dibutyltin dilaurate

Oral LD50 175 mg/kg (rat)

* **Primary irritant effect:**

* **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

* **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

* **Sensitisation:**

May cause an allergic skin reaction.

* **Additional toxicological information:**

Special characteristics/effects of isocyanates:

In case of over-exposure - especially when spraying isocyanate based varnishes without protective measures - there is a danger of a concentration-dependent, irritating effect on eyes, nose, throat, and respiratory tract. The delayed appearance of symptoms and the development of hypersensitivity (trouble breathing, cough, asthma) are possible. For hypersensitive persons, reactions may be triggered by very low isocyanate concentrations, also below the TLV value. In case of prolonged contact with skin, tanning and irritating effects are possible.

* **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

* **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

* **Carcinogenicity** Based on available data, the classification criteria are not met.

* **Reproductive toxicity**

May damage the unborn child.

* **STOT-single exposure**

May cause respiratory irritation.

* **STOT-repeated exposure** Based on available data, the classification criteria are not met.

* **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

* **12.1 Toxicity**

* **Aquatic toxicity:** No further relevant information available.

* **12.2 Persistence and degradability** No further relevant information available.

* **12.3 Bioaccumulative potential** No further relevant information available.

* **12.4 Mobility in soil** No further relevant information available.

* **Ecotoxicological effects:**

* **Remark:** Harmful to fish

* **Additional ecological information:**

* **General notes:**

Do not allow product to reach ground water, bodies of water or sewage system.

Harmful to aquatic organisms

Do not allow undiluted or larger quantities of the product to reach ground water, bodies of water or sewage system.

* **12.5 Results of PBT and vPvB assessment**

* **PBT:** Not applicable.

* **vPvB:** Not applicable.

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* **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

* **13.1 Waste treatment methods*** **Recommendation**

The given refuse codes are recommendations based upon the intended use of the product. Because of special use and disposal conditions at the user's, other codes may apply under other conditions. Do not dispose of together with household garbage. Do not allow product to reach sewage system.

* **European waste catalogue**

08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances

* **Uncleaned packaging:*** **Recommendation:** Disposal must be made according to official regulations.* **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

* **14.1 UN-Number*** **ADR, ADN, IMDG, IATA** Void* **14.2 UN proper shipping name*** **ADR, ADN, IMDG, IATA** Void* **14.3 Transport hazard class(es)*** **ADR, ADN, IMDG, IATA*** **Class** Void* **14.4 Packing group*** **ADR, IMDG, IATA** Void* **14.5 Environmental hazards:*** **Marine pollutant:** No* **14.6 Special precautions for user** Not applicable.* **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.* **Transport/Additional information:** Not a hazardous good according to the above regulations.* **UN "Model Regulation":** Void

SECTION 15: Regulatory information

* **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture*** **Directive 2012/18/EU*** **Named dangerous substances - ANNEX I** None of the ingredients is listed.* **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 20, 30* **National regulations*** **Other regulations, limitations and prohibition ordinances**

From the European Committee of the Associations for varnish, printing ink and artistry paint producers - CEPE - the following information is given for isocyanate based coating materials:

Ready-to-use coating materials that contain isocyanates may have an irritating effect on mucous membranes - especially on respiratory organs - and cause hypersensitivity reactions. There is a risk of sensitization if vapours or sprayed mist are inhaled. When handling isocyanate based coating materials, all measures for solvent based coating materials must be strictly observed. Sprayed mist and vapours especially should not be inhaled.

Persons with allergies or asthma who have a tendency for respiratory tract ailments should not be allowed to work with isocyanate based coating materials.

* **Substances of very high concern (SVHC) according to REACH, Article 57**

CAS: 872-50-4 N-methyl-2-pyrrolidone

* **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

Delivery specifications are found in the respective Technical Information Sheets.

This data is based on our present state of knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.

* Relevant phrases

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H360 May damage fertility or the unborn child.
- H360D May damage the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

* **Department issuing data specification sheet:** Product Safety department / EHS

* Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Resp. Sens. 1: Respiratory sensitisation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- Muta. 2: Germ cell mutagenicity – Category 2
- Repr. 1A: Reproductive toxicity – Category 1A
- Repr. 1A: Reproductive toxicity – Category 1A
- Repr. 1B: Reproductive toxicity – Category 1B
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3