

3393809

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SECTION 01: Identification of the substance/mixture and of the company undertaking

• 1.1 Product identifier

- Trade name:
OW COMBI 2316 AUFHELLEND
- Article number / Safety Data Sheet:
231600
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the preparation
Coating material

• 1.3 Details of the supplier of the safety data sheet

* Manufacturer/Supplier:
Teknos AG
Industriestrasse 7
LI-9487 Gamprin-Bendern
T +423 375 94 00
F +423 375 94 99

- Further information obtainable from:
Product safety department. e-mail address: li-sdb@teknos.com
- 1.4 Emergency telephone number:
Swiss Toxicological Information Centre, CH-8032 Zürich Emergency telephone: +41 (0)44 251 51 51 (International)

SECTION 02: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS02

Flam. Liq. 2 - H225 Highly flammable liquid and vapour.



GHS05

Eye Dam. 1 - H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 - H315 Causes skin irritation.
STOT SE 3 - H336 May cause drowsiness or dizziness.



GHS08

Repr. 2 - H361d Suspected of damaging the unborn child.
STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.

- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms



GHS02



GHS05



GHS07



GHS08

- Signal word
Danger

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- Hazard-determining components of labelling:
n-butyl acetate / acetone / toluene / butanol
- Hazard statements
H225 Highly flammable liquid and vapour.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H315 Causes skin irritation.
- Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P302+P352 IF ON SKIN: Wash with plenty of water.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.
- **2.3 Other hazards**
- *Results of PBT and vPvB assessment*
- PBT:
Not applicable.
- vPvB:
Not applicable.

SECTION 03: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- *Description:*
Mixture of substances listed below with nonhazardous additions.
- *Dangerous components:*

CAS Number		%
108-88-3	toluene EC number: 203-625-9 Record number 01-2119471310-51 ⚠ Flam. Liq. 2 - H225; ⚠ Repr. 2 - H361d, STOT RE 2 - H373, Asp. Tox. 1 - H304; ⚠ Skin Irrit. 2 - H315, STOT SE 3 - H336	10,00- 25,00
78-83-1	butanol EC number: 201-148-0 Record number 01-2119484609-23 ⚠ Eye Dam. 1 - H318; ⚠ Flam. Liq. 3 - H226; ⚠ Skin Irrit. 2 - H315, STOT SE 3 - H335-H336	5,00- 10,00
123-86-4	n-butyl acetate EC number: 204-658-1 Record number 01-2119485493-29 ⚠ Flam. Liq. 3 - H226; ⚠ STOT SE 3 - H336	10,00- 25,00
141-78-6	ethyl acetate EC number: 205-500-4 Record number 01-2119475103-46 ⚠ Flam. Liq. 2 - H225; ⚠ Eye Irrit. 2 - H319-EUH066, STOT SE 3 - H336	5,00- 10,00
67-64-1	acetone EC number: 200-662-2	10,00- 25,00

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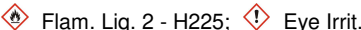
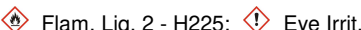
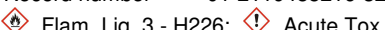
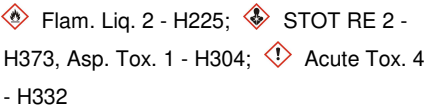
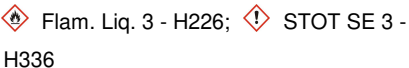
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	Record number 01-2119471330-49	
		
	2 - H319-EUH066, STOT SE 3 - H336	
67-63-0	propan-2-ol	1,00- 5,00
	EC number: 200-661-7	
	Record number 01-2119457558-25	
		
	2 - H319, STOT SE 3 - H336	
1330-20-7	xylene	5,00- 10,00
	EC number: 215-535-7	
	Record number 01-2119488216-32	
		
	4 - H312, Acute Tox. 4 - H332, Skin Irrit. 2 - H315	
100-41-4	ethylbenzene	1,00- 5,00
	EC number: 202-849-4	
	Record number 01-2119489370-35	
		
107-98-2	1-methoxy-2-propanol	0,0015- 0,50
	EC number: 203-539-1	
	Record number 01-2119457435-35	
		
	H336	
	• <i>Additional information:</i> For the wording of the listed risk phrases refer to section 16.	

SECTION 04: First aid measures

- 4.1 Description of first aid measures
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- 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
No further relevant information available.

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SECTION 05: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:**
Water with full jet
- **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:**
Mouth respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 06: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system.
In case of seepage into the ground inform responsible authorities.
In case of gas release or seepage into the ground inform responsible authorities.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose 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 disposal information.

SECTION 07: Handling and storage

- **Handling:**
- **7.1 Precautions for safe handling**
Open and handle receptacle with care.
Take note of emission threshold.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Prevent impact and friction.
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
- **Information about storage in one common storage facility:**
Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)**

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No further relevant information available.

*(continued of page 4)***SECTION 08: Exposure controls/personal protection**

- 8.1 Control parameters
- **Ingredients with limit values that require monitoring at the workplace:**

108-88-3	toluene		
WEL			
	Short-term value	384	mg/m3
		100	ppm
	Long-term value	191	mg/m3
		50	ppm
	Sk		
78-83-1	butanol		
WEL			
	Short-term value	231	mg/m3
		75	ppm
	Long-term value	154	mg/m3
		50	ppm
123-86-4	n-butyl acetate		
WEL			
	Short-term value	966	mg/m3
		200	ppm
	Long-term value	724	mg/m3
		150	ppm
141-78-6	ethyl acetate		
WEL			
	Short-term value	1468	mg/m3
		400	ppm
	Long-term value	734	mg/m3
		200	ppm
67-64-1	acetone		
WEL			
	Short-term value	3620	mg/m3
		1500	ppm
	Long-term value	1210	mg/m3
		500	ppm
67-63-0	propan-2-ol		
WEL			
	Short-term value	1250	mg/m3
		500	ppm
	Long-term value	999	mg/m3
		400	ppm
1330-20-7	xylene		
WEL			
	Short-term value	441	mg/m3
		100	ppm
	Long-term value	220	mg/m3
		50	ppm
	Sk; BMGV		

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100-41-4	ethylbenzene		
WEL			
	Short-term value	552	mg/m3
		125	ppm
	Long-term value	441	mg/m3
		100	ppm
	Sk		
107-98-2	1-methoxy-2-propanol		
WEL			
	Short-term value	560	mg/m3
		150	ppm
	Long-term value	375	mg/m3
		100	ppm
	Sk		

- Ingredients with biological limit values:

1330-20-7 xylene

BMGV

650 mmol/mol creatinine

Medium: urine

Sampling time: post shift

Parameter: methyl hippuric acid

- *Additional information:*
The lists valid during the making were used as basis.
- *8.2 Exposure controls*
- **Personal protective equipment:**
- *General protective and hygienic measures:*
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Store protective clothing separately.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Be sure to clean skin thoroughly after work and before breaks.
- *Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. Suitable respiratory protective device recommended.*
- *Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Protective gloves Impervious gloves*
- **Material of gloves**
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**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
- *Eye protection: Safety glasses Tightly sealed goggles*
- *Body protection: Protective work clothing*

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SECTION 09: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Appearance:

Form:	Liquid
Colour:	According to product specifica
Odour:	Characteristic Characteristic
Odour threshold:	Not determined.

Change in condition

Initial boiling point and boiling range:	55 °C
Flash point:	-19 °C
Flammability (solid, gas):	Not applicable.
Ignition temperature:	180 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Not determined.
Explosive properties:	Not determined.
Explosion limits:	
Lower:	1 Vol %
Upper:	13 Vol %
Vapour pressure:	at 20 °C 10,7000 mbar at 50 °C 55,0000 mbar
Density:	0,9300 g/cm3
Solubility in / Miscibility with water:	Not determined.
Viscosity:	
.	Not determined.
.	at 20 °C 30 - 33 s DIN 4 mm
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 used according to specifications.
- **10.3 Possibility of hazardous reactions**
No dangerous reactions known.
- **10.4 Conditions to avoid**
No further relevant information available.
- **10.5 Incompatible materials:**
No further relevant information available.
- **10.6 Hazardous decomposition products:**
No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- **LD/LC50 values relevant for classification:**

108-88-3 toluene

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Oral, LD50: 5000 mg/kg (rat) Dermal, LD50: 12124 mg/kg (Rabbit) Inhalative, LC50/4h: 5320 mg/l (mouse) Oral, LD50: 2460 mg/kg (rat) Dermal, LD50: 3400 mg/kg (Rabbit) Oral, LD50: 13100 mg/kg (rat) Dermal, LD50: >5000 mg/kg (Rabbit) Inhalative, LC50/4h: >21 mg/l (rat) Oral, LD50: 4900 mg/kg (rat) Dermal, LD50: 9500 mg/kg (Rabbit) Oral, LD50: 5620 mg/kg (Rabbit) Inhalative, LC50/4h: 1600 mg/l (rat) Oral, LD50: 5800 mg/kg (rat) Dermal, LD50: 20000 mg/kg (Rabbit) Oral, LD50: 5045 mg/kg (rat) Dermal, LD50: 12800 mg/kg (Rabbit) Inhalative, LC50/4h: 30 mg/l (rat) Oral, LD50: 10000 mg/kg (rat) Oral, LD50: 4300 mg/kg (rat) Dermal, LD50: 2000 mg/kg (Rabbit) Oral, LD50: 3500 mg/kg (rat) Dermal, LD50: 17800 mg/kg (Rabbit) Oral, LD50: 9110 mg/kg (rat) Dermal, LD50: 8410 mg/kg (Rabbit) Oral, LD50: 5660 mg/kg (rat) Dermal, LD50: 13000 mg/kg (Rabbit) Inhalative, LC50/4h: 6 mg/l (rat) Oral, LD50: 8532 mg/kg (rat) Inhalative, LC50/4h: 35,7 mg/l (rat) Oral, LD50: >20000 mg/kg (rat) Dermal, LD50: >10000 mg/kg (Rabbit) Inhalative, LC50/4h: >6,82 mg/l (rat) Oral, LD50: 526 mg/kg (rat) Oral, LD50: 14500 mg/kg (rat)

78-83-1	butanol
123-86-4	n-butyl acetate
1569-02-4	1-ethoxypropan-2-ol
141-78-6	ethyl acetate
67-64-1	acetone
67-63-0	propan-2-ol
7631-86-9	silicon dioxide, chemically prepared
1330-20-7	xylene
100-41-4	ethylbenzene
103-23-1	Di-(2-ethylhexyl) adipate
107-98-2	1-methoxy-2-propanol
108-65-6	2-methoxy-1-methylethyl acetate
13463-67-7	titanium dioxide
7447-41-8	lithium chloride
67-68-5	dimethyl sulfoxide

- *Primary irritant effect:*
- Skin corrosion/irritation
Irritant to skin and mucous membranes.
- Serious eye damage/irritation
Strong irritant with the danger of severe eye injury.
- *Respiratory or skin sensitisation*
No sensitising effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- *CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)*
Repr. 2

SECTION 12: Ecological information

- *12.1 Toxicity*
- Aquatic toxicity:
No further relevant information available.
- **12.2 Persistence and degradability**
No further relevant information available.
- **Behaviour in environmental systems:**
- *12.3 Bioaccumulative potential*
No further relevant information available.
- 12.4 Mobility in soil
No further relevant information available.
- **Additional ecological information:**
- *General notes:*
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- *PBT:*

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- Not applicable.
- vPvB:
Not applicable.
- 12.6 Other adverse effects**
No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods**
- European and swiss waste code**
08
WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01
wastes from MFSU and removal of paint and varnish
08 01 11
waste paint and varnish containing organic solvents or other hazardous substances
- Uncleaned packaging:**
- Recommendation:**
Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number**
ADR UN1263
IMDG UN1263
IATA UN1263
- 14.2 UN proper shipping name**
ADR 1263 PAINT
IMDG PAINT
IATA PAINT
- 14.3 Transport hazard class(es)**
ADR
Class 3 Flammable liquids.
Label **3**

- IMDG
Class 3 Flammable liquids.
Label **3**

- IATA
Class 3 Flammable liquids.

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Label



- **14.4 Packing group**

ADR II

IMDG II

IATA II

- **14.5 Environmental hazards:**

Not applicable.

- **14.6 Special precautions for user**

Warning: Flammable liquids.

Danger code (Kemler): 33

EMS Number: F-E,S-E

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

- **Transport/Additional information:**

Not applicable.

Excepted quantities (EQ): E2

Limited quantities (LQ) 5L

Transport category 2

Tunnel restriction code D/E

IMDG

Limited quantities (LQ) 5L

Excepted quantities (EQ) E2

- **UN "Model Regulation":**

UN 1263 PAINT, 3, II

SECTION 15: Regulatory information

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

- **REGULATION (EC) No 1907/2006 ANNEX XVII**

Conditions of restriction: 3, 40, 48

- **National regulations:**

- **Technical instructions (air):**

- **Class Share in %**

II 21, 33

III 20, 33

- **Waterhazard class:**

Water hazard class 2 (Self-assessment): hazardous for water.

- **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

EUH066 Repeated exposure may cause skin dryness or cracking.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

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H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

- **Department issuing MSDS:**

Environment protection department.

- **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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

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

vPvB: very Persistent and very Bioaccumulative

- * Data compared to the previous version altered.