MATERIAL SAFETY DATA SHEET
according to ISO/DIS 11014

2817313
Reviewed on: 07.06.2019
Printing date: 07.06.2019

01 Identification

- ***Product identifier***

- *Trade name:*
  VERDÜNNER 1300-98

- Article number:
  V13000

- ***Details of the supplier of the safety data sheet***
- *Manufacturer/Supplier:*
  Teknos Feyco AG
  Industriestrasse 3
  LI-9487 Gamprin-Bendern
  T +423 375 94 00
  F +423 375 94 99

- *Information department:*
  Product safety department.
  e-mail: li-sdb@teknos.com
- *Emergency telephone number:*
  Swiss Toxicological Information Centre
  Emergency telephone: +41 (0)44 251 51 51

* 02 Hazard(s) identification

- *Classification of the substance or mixture*

GHS02

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

GHS07

* Skin Irrit. 2 - H315 Causes skin irritation.
* Eye Irrit. 2A - H319 Causes serious eye irritation.
* STOT SE 3 - H336 May cause drowsiness or dizziness.

GHS08

* Carc. 2 - H351 Suspected of causing cancer.
* Repr. 2 - H361 Suspected of damaging fertility or the unborn child.
* STOT RE 2 - H373 May cause damage to organs through prolonged or
* repeated exposure.

- *Label elements*
- GHS label elements
- Hazard pictograms

GHS02 GHS07 GHS08

- Signal word
  Danger

- Hazard-determining components of labeling:
* n-butyl acetate / toluene / ethyl acetate / ethylbenzene
* • Hazard statements
  H225 Highly flammable liquid and vapour.
* H315 Causes skin irritation.
* H319 Causes serious eye irritation.
* H336 May cause drowsiness or dizziness.

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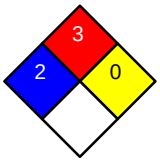
* H351 Suspected of causing cancer.
* H361 Suspected of damaging fertility or the unborn child.
* H373 May cause damage to organs through prolonged or repeated
* exposure.

- Precautionary statements

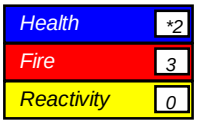
* P201 Obtain special instructions before use.
* P202 Do not handle until all safety precautions have been read and understood.
* P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
* P302+P352 IF ON SKIN: Wash with plenty of water.
* P403+P233 Store in a well-ventilated place. Keep container tightly closed.
* P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

- *NFPA ratings (scale 0 - 4)*



Health = 2
Fire = 3
Reactivity = 0

- *HMIS-ratings (scale 0 - 4)*



Health = *2
Fire = 3
Reactivity = 0

03 Composition/information on ingredients

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

- *Dangerous components:*

	CAS Number		***%***
*	***100-41-4***	***ethylbenzene***	***1,00- 5,00***
*		***EC number: 202-849-4***	
*		***Reg. nr.: 01-2119489370-35***	
*	***108-88-3***	***toluene***	***15,00- 25,00***
*		***EC number: 203-625-9***	
*		***Reg. nr.: 01-2119471310-51***	
*	***1330-20-7***	***xylene***	***1,00- 5,00***
*		***EC number: 215-535-7***	
*		***Reg. nr.: 01-2119488216-32***	
*	***123-86-4***	***n-butyl acetate***	***40,00- 60,00***
*		***EC number: 204-658-1***	
*		***Reg. nr.: 01-2119485493-29***	
*	***141-78-6***	***ethyl acetate***	***5,00- 10,00***
*		***EC number: 205-500-4***	
*		***Reg. nr.: 01-2119475103-46***	

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04 First-aid measures

- ***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.
- ***After eye contact:***
  Rinse opened eye for several minutes under running water.
- ***After swallowing:***
  Do not induce vomiting; immediately call for medical help.

05 Fire-fighting measures

- ***Suitable extinguishing agents:***
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- ***For safety reasons unsuitable extinguishing agents:***
  Water with full jet
- ***Special hazards arising from the substance or mixture***
  Formation of toxic gases is possible during heating or in case of fire.
- *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.

06 Accidental release measures

- ***Personal precautions, protective equipment and emergency procedures***
  Wear protective equipment. Keep unprotected persons away.
  Ensure adequate ventilation
- ***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.
  Do not allow to enter sewers/ surface or ground water.
- ***Methods and material for containment and cleaning up:***
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- ***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.
- *Protective Action Criteria for Chemicals*
- PAC-1:

```
*   100-41-4    ethylbenzene : 33 ppm
*   108-88-3    toluene : 67 ppm
*   123-86-4    n-butyl acetate : 5 ppm
*   1330-20-7   xylene : 130 ppm
*   141-78-6    ethyl acetate : 1,200 ppm
```

- PAC-2:

```
*   100-41-4    ethylbenzene : 1100* ppm
*   108-88-3    toluene : 560 ppm
*   123-86-4    n-butyl acetate : 200 ppm
*   1330-20-7   xylene : 920* ppm
*   141-78-6    ethyl acetate : 1,700 ppm
```

- PAC-3:

```
*   100-41-4    ethylbenzene : 1800* ppm
*   108-88-3    toluene : 3700* ppm
*   123-86-4    n-butyl acetate : 3000* ppm
*   1330-20-7   xylene : 2500* ppm
*   141-78-6    ethyl acetate : 10000** ppm
```


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07 Handling and storage

- ***Handling:***
- *Precautions for safe handling*
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
  Take note of emission threshold.
  Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- *Information about protection against explosions and fires:*
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- ***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 receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
  Protect from heat and direct sunlight.
- ***Specific end use(s)***
  No further relevant information available.

08 Exposure controls/personal protection

* • ***Components with limit values that require monitoring at the workplace:***
* ***100-41-4 ethylbenzene***
PEL
* ***Long-term value 435 mg/m3***
* ***100 ppm***
* ***REL***
* ***Short-term value 545 mg/m3***
* ***125 ppm***
* ***Long-term value 435 mg/m3***
* ***100 ppm***
* ***TLV***
* ***Long-term value 87 mg/m3***
* ***20 ppm***
* ***BEI***
* ***108-88-3 toluene***
* ***PEL***
* ***Long-term value 200 ppm***
* ****10-min peak per 8-hr shift***
* ***REL***
* ***Short-term value 560 mg/m3***
* ***150 ppm***
* ***Long-term value 375 mg/m3***
* ***100 ppm***
* ***TLV***
* ***Long-term value 75 mg/m3***
* ***20 ppm***
* ***BEI***
* ***1330-20-7 xylene***
* ***PEL***
* ***Long-term value 435 mg/m3***
* ***100 ppm***

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*	***REL***			
*		***Short-term value***	***655***	***mg/m3***
*			***150***	***ppm***
*		***Long-term value***	***435***	***mg/m3***
*			***100***	***ppm***
*	***TLV***			
*		***Short-term value***	***651***	***mg/m3***
*			***150***	***ppm***
*		***Long-term value***	***434***	***mg/m3***
*			***100***	***ppm***
*		***BEI***		
*	***123-86-4***	***n-butyl acetate***		
*	***PEL***			
*		***Long-term value***	***710***	***mg/m3***
*			***150***	***ppm***
*	***REL***			
*		***Short-term value***	***950***	***mg/m3***
*			***200***	***ppm***
*		***Long-term value***	***710***	***mg/m3***
*			***150***	***ppm***
*	***TLV***			
*		***Short-term value***	***712***	***mg/m3***
			150	***ppm***
*		***Long-term value***	***238***	***mg/m3***
*			***50***	***ppm***
*	***141-78-6***	***ethyl acetate***		
*	***PEL***			
*		***Long-term value***	***1400***	***mg/m3***
*			***400***	***ppm***
*	***REL***			
		Long-term value	***1400***	***mg/m3***
			400	***ppm***
*	***TLV***			
*		***Long-term value***	***1440***	***mg/m3***
			400	***ppm***

• Ingredients with biological limit values:

*	***100-41-4***	***ethylbenzene***
	BEI	
*		***0.7 g/g creatinine***
*		***urine***
*		***end of shift at end of workweek***
*		***Sum of mandelic acid and phenylglyoxylic acid (nonspecific,***
*		***semi-quantitative)***
*		***-***
*		***end-exhaled air***
*		***not critical***
*		***Ethyl benzene (semi-quantitative)***
*	***108-88-3***	***toluene***
*	***BEI***	
*		***0.02 mg/L***
*		***blood***
*		***prior to last shift of workweek***

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* ***Toluene***
* ***0.03 mg/L***
* ***urine***
* ***end of shift***
* ***Toluene***
* ***0.3 mg/g creatinine***
* ***urine***
* ***end of shift***
* ***o-Cresol with hydrolysis (background)***
* ***1330-20-7 xylene***
* ***BEI***
* ***1.5 g/g creatinine***
* ***urine***
* ***end of shift***
* ***Methylhippuric acids***

- *Additional information:*
  The lists that were valid during the creation were used as basis.
- ***Personal protective equipment:***
- *General protective and hygienic measures:*
  The usual precautionary measures for handling chemicals should be followed.
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing.
  Do not inhale gases / fumes / aerosols.
  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.
- *Breathing equipment: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. 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*

09 Physical and chemical properties

	General Information	
	Appearance:	
	Form:	Liquid
*	***Color:***	According to product specifica
	Odor:	Characteristic Characteristic
	Odor threshold:	Not determined.
	Change in condition	
*	***Boiling point/Boiling range:***	77 °C
*	***Flash point:***	-4 °C
	Flammability (solid, gaseous):	Not applicable.
*	***Ignition temperature:***	Undetermined.

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Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Not determined.
Explosion limits:	
* ***Lower:***	Not determined.
* ***Upper:***	Not determined.
* ***Vapor pressure:***	Not determined.
Density:	0,8800 g/cm3
Solubility in / Miscibility with	
Water:	Not determined.
Viscosity:	
.	Not determined.
.	Not determined.
Solvent content:	
Organic solvents:	100,00 %
Other information	No further relevant information available.

10 Stability and reactivity

- ***Thermal decomposition / conditions to be avoided:***
  No decomposition if used according to specifications.
- ***Incompatible materials:***
  No further relevant information available.
- ***Hazardous decomposition products:***
  No dangerous decomposition products known.

11 Toxicological information

- ***Acute toxicity:***
- *LD/LC50 values that are relevant for classification:*

* ***100-41-4 ethylbenzene***
* Oral, LD50: 3500 mg/kg (rat)
* Dermal, LD50: 17800 mg/kg (Rabbit)

* ***108-88-3 toluene***
* Oral, LD50: 5000 mg/kg (rat)
* Dermal, LD50: 12124 mg/kg (Rabbit)
* Inhalative, LC50/4h: 5320 mg/l (mouse)

* ***1330-20-7 xylene***
* Oral, LD50: 4300 mg/kg (rat)
* Dermal, LD50: 2000 mg/kg (Rabbit)

123-86-4 n-butyl acetate
Oral, LD50: 13100 mg/kg (rat)
Dermal, LD50: >5000 mg/kg (Rabbit)
* Inhalative, LC50/4h: >21 mg/l (rat)

141-78-6 ethyl acetate
Oral, LD50: 5620 mg/kg (Rabbit)
Inhalative, LC50/4h: 1600 mg/l (rat)

- *Primary irritant effect:*
- on the skin:
  Irritant to skin and mucous membranes.
- on the eye:
  No irritating effect.
- *Sensitization:*
  No sensitizing effects known.
- ***Additional toxicological information:***
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Irritant
  The product can cause deformations.

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- *Carcinogenic categories*
- IARC (International Agency for Research on Cancer)

* 100-41-4 ethylbenzene : 2B
* 108-88-3 toluene : 3
* 1330-20-7 xylene : 3

- NTP (National Toxicology Program)

* None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)

* None of the ingredients is listed.

12 Ecological information

- Aquatic toxicity:
  No further relevant information available.
- ***Persistence and degradability***
  No further relevant information available.
- ***Behavior in environmental systems:***
- *Bioaccumulative potential*
  No further relevant information available.
- ***Additional ecological information:***
- *General notes:*
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
  Water hazard class 2 (Self-assessment): hazardous for water

13 Disposal considerations

- ***Uncleaned packagings:***
- *Recommendation:*
  Disposal must be made according to official regulations.

14 Transport information

- ***UN-Number***

DOT	UN1263
ADR	UN1263
IMDG	UN1263
IATA	UN1263

- ***UN proper shipping name***

DOT	PAINT RELATED MATERIAL
ADR	1263 FARBZUBEHÖRSTOFFE
IMDG	PAINT RELATED MATERIAL
IATA	PAINT RELATED MATERIAL

- ***Transport hazard class(es)***

DOT

Class 3 Flammable liquids

Label 3

ADR

Class 3 Flammable liquids

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Label 3

IMDG
Class 3 Flammable liquids
Label 3

IATA
Class 3 Flammable liquids
Label 3

- ***Packing group***

DOT II
ADR II
IMDG II
IATA II

- ***Environmental hazards:***
  Not applicable.
- ***Special precautions for user***
  Warning: Flammable liquids

Danger code (Kemler): 33
EMS Number: F-E,S-E

- ***Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code***
  Not applicable.

- ***Transport/Additional information:***
  Not applicable.

DOT
* ***Quantity limitations*** On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
IMDG
* ***Limited quantities (LQ)*** 5L
* ***Excepted quantities (EQ)*** E2

- ***UN "Model Regulation":***
  UN 1263 FARBZUBEHÖRSTOFFE, 3, II

15 Regulatory information

- *TSCA (Toxic Substances Control Act):*

* 100-41-4 ethylbenzene
* 108-88-3 toluene
* 123-86-4 n-butyl acetate
* 1330-20-7 xylene
* 141-78-6 ethyl acetate

- TSCA new (21st Century Act)

* 100-41-4 ethylbenzene : ACTIVE/EXEMPT
* 108-88-3 toluene : ACTIVE/EXEMPT

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* 123-86-4 n-butyl acetate : ACTIVE/EXEMPT
* 1330-20-7 xylene : ACTIVE/EXEMPT
* 141-78-6 ethyl acetate : ACTIVE/EXEMPT

- *Proposition 65*
- Chemicals known to cause cancer:
  100-41-4 ethylbenzene
- Chemicals known to cause reproductive toxicity for females:
  108-88-3 toluene
- Chemicals known to cause reproductive toxicity for males:
* None of the ingredients is listed.
- Chemicals known to cause developmental toxicity:
  108-88-3 toluene

- *Carcinogenic categories*
- EPA (Environmental Protection Agency)
  100-41-4 ethylbenzene : D
  108-88-3 toluene : II
  1330-20-7 xylene : I
- TLV (Threshold Limit Value established by ACGIH)
  100-41-4 ethylbenzene : A3
  108-88-3 toluene : A4
  1330-20-7 xylene : A4
- NIOSH-Ca (National Institute for Occupational Safety and Health)
* None of the ingredients is listed.

- ***National regulations:***

- *Classification according to VbF:*
  -

- *Technical instructions (air):*
- Class Share in %
* II 31,00
* III 50,00

- *Water hazard class:*
  Water hazard class 2 (Self-assessment): hazardous for water.
- *New Jersey Right-to-Know List:*
* 100-41-4 ethylbenzene
* 108-88-3 toluene
* 123-86-4 n-butyl acetate
* 1330-20-7 xylene
* 141-78-6 ethyl acetate
- *New Jersey Special Hazardous Substance List:*
* 100-41-4 ethylbenzene : CA, F3
* 108-88-3 toluene : TE, F3
* 123-86-4 n-butyl acetate : F3
* 1330-20-7 xylene : F3
* 141-78-6 ethyl acetate : F3
- *Pennsylvania Right-to-Know List:*
* 100-41-4 ethylbenzene
* 108-88-3 toluene
* 123-86-4 n-butyl acetate
* 1330-20-7 xylene
* 141-78-6 ethyl acetate
- *Pennsylvania Special Hazardous Substance List:*
* 100-41-4 ethylbenzene : E
* 108-88-3 toluene : E
* 123-86-4 n-butyl acetate : E
* 1330-20-7 xylene : E
* 141-78-6 ethyl acetate : E

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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

*	H225	Highly flammable liquid and vapour.
*	H226	Flammable liquid and vapour.
*	H304	May be fatal if swallowed and enters airways.
*	H312	Harmful in contact with skin.
*	H315	Causes skin irritation.
*	H319	Causes serious eye irritation.
*	H332	Harmful if inhaled.
*	H336	May cause drowsiness or dizziness.
*	H351	Suspected of causing cancer.
*	H361	Suspected of damaging fertility or the unborn child.
*	H373	May cause damage to organs through prolonged or repeated exposure.

- ***Department issuing MSDS:***
  Environment protection department.
- *Date of preparation / last revision*
  * 07.06.2019
- *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
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ICAO: International Civil Aviation Organisation
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  ACGIH: American Conference of Governmental Industrial Hygienists
  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)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
- ** Data compared to the previous version altered.*