

Article No.: 20709
Print date 05.10.2017
Version 4.0

KIWODUR 1000 HMT
Revision date 31.07.2017
Issue date 31.07.2017

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

1.1. product identifiers

Article No. (manufacturer/supplier): 20709
Identification of the substance or mixture KIWODUR 1000 HMT

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

Relevant identified uses

Curing agent. Reserved for industrial and professional use.

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

Kissel + Wolf GmbH
In den Ziegelwiesen 6 Telephone: 49 6222 578-0
69168 Wiesloch Telefax: 49 6222 578-100
Germany E-mail: info@kiwo.de

Dept. responsible for information:

RA - Regulatory Affairs
E-mail ra@kiwo.de

1.4. Emergency telephone number

Emergency telephone number +49 6222 578 219

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Resp. Sens. 1 / H334	Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Carc. 2 / H351	Carcinogenicity	Suspected of causing cancer.
STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.
STOT SE 3 / H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.
STOT RE 2 / H373	Specific target organ toxicity (repeated exposure)	May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

The product is classified and labelled according to EC directives or corresponding national laws.

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830



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P260 Do not breathe vapour.
P261 Avoid breathing vapours.
P280 Wear protective gloves and eye/face protection.
P284 In case of inadequate ventilation wear respiratory protection.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P370 + P378 In case of fire: Use extinguishing powder or sand to extinguish.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.

contains:

diphenylmethanediisocyanate, isomeres and homologues
Ethyl acetate
dibutyltindilaurate

Supplemental Hazard information (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH204 Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Product description / chemical characterization

Description Mixture of components, as listed below, with nonhazardous constituents

Hazardous ingredients

Classification according to Regulation (EC) No 1272/2008 [CLP]

EC No.	REACH No.	Wt %
CAS No.	Chemical name	
INDEX No.	classification: // Remark	
205-500-4	01-2119475103-46-xxxx	
141-78-6	Ethyl acetate	50 - 70
607-022-00-5	Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336	
500-079-6		
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues 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	35 - 50
201-039-8	01-2119496068-27	
77-58-7	dibutyltindilaurate Skin Corr. 1C H314 / Skin Sens. 1 H317 / Muta. 2 H341 / Repr. 1B H360 / STOT SE 1 H370 / STOT RE 1 H372 / Aquatic Acute 1 H400 / Aquatic Chronic 1 H410	0,15 - 0,2

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing.

After eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion

Seek medical advice immediately. Do NOT induce vomiting.

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4.2. **Most important symptoms and effects, both acute and delayed**
In all cases of doubt, or when symptoms persist, seek medical advice.

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

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media:

Carbon dioxide Water mist Foam

Extinguishing media which must not be used for safety reasons:

strong water jet

5.2. **Special hazards arising from the substance or mixture**

Gases/vapours, toxic

5.3. **Advice for firefighters**

Provide a conveniently located respiratory protective device.

Additional information

The danger areas must be delimited and identified using relevant warning and safety signs. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures**

Keep away from sources of ignition. Ventilate affected area. Remove persons to safety. Do not breathe vapours. See protective measures under point 7 and 8.

6.2. **Environmental precautions**

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations. Provide good ventilation.

6.3. **Methods and material for containment and cleaning up**

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

6.4. **Reference to other sections**

Observe protective provisions (see chapter 7 and 8).

SECTION 7: Handling and storage

7.1. **Precautions for safe handling**

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Product may become electrostatically charged. When transferring, earthed pipework shall be used exclusively. Anti-static clothing including shoes are recommended. Use only spark proof tools. Avoid contact with eyes and skin. Do not inhale vapours or mist.

Do not eat, drink or smoke when using this product.

Personal protection equipment: refer to section 8.

Follow the legal protection and safety regulations.

7.2. **Conditions for safe storage, including any incompatibilities**

Technical measures and storage conditions

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels

Always keep in containers that correspond to the material of the original container. Ensure adequate ventilation of the storage area.

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information

VCI-storage class, see Chapter 15

7.3. **Specific end use(s)**

Observe technical data sheet. Observe instructions for use.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

Ethyl acetate

INDEX No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6

DFG, MAK, TWA: 750 mg/m³; 200 ppm

DFG, MAK, STEL: 1500 mg/m³; 400 ppm

TRGS 900, AGW, TWA: 1500 mg/m³; 400 ppm

TRGS 900, AGW, STEL: 3000 mg/m³; 800 ppm

diphenylmethanediisocyanate, isomeres and homologues

EC No. 500-079-6 / CAS No. 9016-87-9

TRGS 900, TWA: 0,05 mg/m³

TRGS 900, STEL: 0,05 mg/m³

TRGS 900, Ceiling: 0,1 mg/m³

dibutyltindilaurate

EC No. 201-039-8 / CAS No. 77-58-7

TRGS 900, AGW, TWA: 0,009 mg/m³; 0,0018 ppm

TRGS 900, AGW, STEL: 0,009 mg/m³; 0,0018 ppm

Additional information

TWA : long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

DNEL:

Ethyl acetate

INDEX No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6

DNEL long-term dermal (local), Workers: 63 mg/kg

DNEL acute inhalative (local), Workers: 1468 mg/m³

DNEL acute inhalative (systemic), Workers: 1468 mg/m³

DNEL long-term inhalative (local), Workers: 734 mg/m³

DNEL long-term inhalative (systemic), Workers: 734 mg/m³

dibutyltindilaurate

EC No. 201-039-8 / CAS No. 77-58-7

DNEL acute dermal, short-term (systemic), Workers: 2,08 mg/kg

DNEL long-term dermal (systemic), Workers: 0,42 mg/kg

DNEL long-term inhalative (systemic), Workers: 0,02 mg/m³

diphenylmethanediisocyanate, isomeres and homologues

EC No. 500-079-6 / CAS No. 9016-87-9

DNEL acute dermal, short-term (local), Workers: 28,7 mg/kg

DNEL acute dermal, short-term (systemic), Workers: 50 mg/kg

DNEL acute inhalative (local), Workers: 0,1 mg/m³

DNEL acute inhalative (systemic), Workers: 0,1 mg/m³

DNEL long-term inhalative (systemic), Workers: 0,05 mg/m³

PNEC:

Ethyl acetate

INDEX No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6

PNEC aquatic, freshwater: 0,24 mg/l

PNEC aquatic, marine water: 0,026 mg/l

PNEC aquatic, intermittent release: 1,65 mg/l

PNEC sediment, freshwater: 1,25 mg/kg

PNEC sediment, marine water: 0,125 mg/kg

PNEC, Soil: 0,24 mg/kg

PNEC sewage treatment plant (STP): 650 mg/l

dibutyltindilaurate

EC No. 201-039-8 / CAS No. 77-58-7

PNEC aquatic, freshwater: 0,463 mg/l

PNEC aquatic, marine water: 0,0463 mg/l

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PNEC aquatic, intermittent release: 4,63 mg/l
PNEC sediment, freshwater: 0,05 mg/kg
PNEC sediment, marine water: 0,005 mg/kg
PNEC, Soil: 0,0407 mg/kg
PNEC sewage treatment plant (STP): 100 mg/l
PNEC Secondary Poisoning: 0,2 mg/kg

diphenylmethanediisocyanate, isomeres and homologues

EC No. 500-079-6 / CAS No. 9016-87-9

PNEC aquatic, freshwater: 1 mg/l
PNEC aquatic, marine water: 0,1 mg/l
PNEC, Soil: 1 mg/kg

8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Hand protection

Chemical resistant protective gloves: DIN EN 374
Recommendation for contact by spatter: Protection Index 2
Permeation time >30 min., e.g. butyl rubber 0,4 mm
Recommendation for direct contact: Protection Index 6
Permeation time >480 min., e.g. nitrile rubber 0,4 mm

Eye protection

Wear closed protection glasses. DIN EN 166

Protective clothing

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical state: liquid
Colour: depending on coloration

Odour: typical

Odour threshold: not applicable

pH at 20 °C: not applicable

Melting point/freezing point: not applicable

Initial boiling point and boiling range: 60 °C
Source: Ethyl acetate

Flash point: -4 °C
Method: DIN 53213

Evaporation rate: not applicable

Flammability (solid, gas):
burning time (s): not applicable

Upper/lower flammability or explosive limits:

Lower explosion limit: 2 Vol-%
Upper explosion limit: 11 Vol-%
Source: Ethyl acetate

Vapour pressure at 20 °C: 59,042 mbar

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Vapour density:	not applicable
Relative density:	
Density at 20 °C:	1,03 g/cm³
Solubility(ies):	
Water solubility (g/L) at 20 °C:	insoluble
Partition coefficient: n-octanol/water:	see section 12
Auto-ignition temperature:	460 °C Source: Ethyl acetate
Decomposition temperature:	not applicable
Viscosity at 23 °C:	10 s 4 mm Method: DIN 53211
Decomposition temperature (°C):	0
Explosive properties:	not applicable
Oxidising properties:	not applicable
9.2. Other information	
Solid content (%):	0,50 Wt %
solvent content:	
Organic solvents:	59 Wt %
Water:	0 Wt %
Solvent separation test (%):	< 3 Wt % (ADR/RID)

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.3. Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid

10.5. Incompatible materials

10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

No data on preparation itself available.

11.1. Information on toxicological effects

Acute toxicity

Ethyl acetate

oral, LD50, Rat: 10170 mg/kg

dermal, LD50, Rabbit: 18000 mg/kg

dibutyltindilaurate

oral, LD50, Rat: 2071 mg/kg

dermal, LD50, Rat: > 2000 mg/kg

diphenylmethanediisocyanate, isomeres and homologues

oral, LD50, Rat: > 10000 mg/kg

dermal, LD50, Rabbit: > 9400 mg/kg

inhalative (Gases), LC50, Rat: 0,32 ppmV (4 h)

skin corrosion/irritation; Serious eye damage/eye irritation

Toxicological data are not available.

Respiratory or skin sensitisation

Toxicological data are not available.

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CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Toxicological data are not available.

Specific target organ toxicity

Toxicological data are not available.

Aspiration hazard

Toxicological data are not available.

Practical experience/human evidence

Other observations:

Prolonged or repeated contact with the preparation can lead to irritations of mucous membranes and of skin such as redness, formation of blebs, dermatitis, etc..In case of inhalation dizziness, Nausea Inhalation causes narcotic effects/intoxication.Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

Overall Assessment on CMR properties

EC No.	Chemical name	Classification according to Regulation (EC) No 1272/2008 [CLP]
201-039-8 77-58-7	dibutyltindilaurate	Repr. 1B

Remark

There is no information available on the preparation itself .

SECTION 12: Ecological information

overall evaluation

Classification according to Regulation (EC) No 1272/2008 [CLP]

Do not store at public landfills.

12.1. Toxicity

Ethyl acetate

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 230 mg/l (96 h)

Daphnia toxicity, EC50, Daphnia magna: 717 mg/l (48 h)

Algae toxicity, ErC50, Desmodesmus subspicatus.: 3300 mg/l

dibutyltindilaurate

Fish toxicity, LC50, Brachydanio rerio (zebra-fish): 3,1 mg/l (96 h)

diphenylmethanediisocyanate, isomeres and homologues

Fish toxicity, LC50: > 1000 mg/l (96 h)

Daphnia toxicity, EC50: (48 h)

Long-term Ecotoxicity

Toxicological data are not available.

12.2. Persistence and degradability

Toxicological data are not available.

12.3. Bioaccumulative potential

Toxicological data are not available.

Bioconcentration factor (BCF)

Toxicological data are not available.

12.4. Mobility in soil

Toxicological data are not available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product

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Recommendation

List of proposed waste codes/waste designations in accordance with EWC

080501 waste isocyanates

packaging

Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number

UN 1866

14.2. UN proper shipping name

Land transport (ADR/RID):

Resin solution
(Ethyl acetate)

Sea transport (IMDG):

RESIN SOLUTION
(Ethyl acetate)

Air transport (ICAO-TI / IATA-DGR):

Resin solution
(Ethyl acetate)

14.3. Transport hazard class(es)

3

14.4. Packing group

II

14.5. Environmental hazards

Land transport (ADR/RID)

not applicable

Marine pollutant

not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

tunnel restriction code

D/E

Sea transport (IMDG)

EmS-No.

F-E, S-E

Air transport (ICAO-TI / IATA-DGR)

Packaging >30 l

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

not applicable

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions

VOC-value (in g/L): 1012,612

Observe in addition any national regulations!

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

calculated with mixing rule

Substance/product listed in the following inventories:

15.2. Chemical Safety Assessment

For the following substances of this preparation a chemical safety assessment has been carried out:

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830



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EC No. CAS No.	Chemical name	REACH No.
205-500-4 141-78-6	Ethyl acetate	01-2119475103-46-xxxx
201-039-8 77-58-7	dibutyltindilaurate	01-2119496068-27

SECTION 16: Other information

Full text of classification in section 3:

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Resp. Sens. 1 / H334	Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Carc. 2 / H351	Carcinogenicity	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.
STOT RE 2 / H373	Specific target organ toxicity (repeated exposure)	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Skin Corr. 1C / H314	skin corrosion/irritation	Causes severe skin burns and eye damage.
Muta. 2 / H341	Germ cell mutagenicity	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Repr. 1B / H360	Reproductive toxicity	May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
STOT SE 1 / H370	Specific target organ toxicity (single exposure)	Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
STOT RE 1 / H372	Specific target organ toxicity (repeated exposure)	Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.

Further information

Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.