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

1.1. Product identifier

Trade name/designation:

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UFI:

DH00-60WK-R007-TKGS

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

Water-miscible coolant lubricant

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Curtis Systems GmbH

Geheimrat-Hummel-Platz Nr. 4

65239 Hochheim

Germany

Telephone: 0614690738-0 **Telefax:** 061469073845 **E-mail:** info@curtis-systems.de

E-mail (competent person): fischer@curtis-systems.de

1.4. Emergency telephone number

Technical department:, 06146-90738-33 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (Skin Irrit. 2)	H315: Causes skin irritation.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	
Hazardous to the aquatic environment (Aquatic Chronic 3)	H412: Harmful to aquatic life with long lasting effects.	

2.2. Label elements

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

Hazard pictograms:



GHS07 Exclamation mark

Signal word: Warning

Hazard statements for health hazards		
H315	Causes skin irritation.	
H319	Causes serious eye irritation.	

Hazard statements for environmental hazards		
H412	Harmful to aquatic life with long lasting effects.	

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Supplemental hazard information: none

Precautionary statements Prevention		
P264	Wash thoroughly after handling.	
P273	Avoid release to the environment.	
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/		

Precautionary statements Response		
P332 + P313	If skin irritation occurs: Get medical advice/attention.	
P337 + P313	If eye irritation persists: Get medical advice/attention.	

2.3. Other hazards

Adverse environmental effects:

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 770-35-4 EC No.: 212-222-7 REACH No.: 01-2119486566-23	1-Phenoxy-2-propan-2-ol Eye Irrit. 2 (H319) Warning Additional information: For full text of Hazard- and EU Hazard-statements: see SECTION 16.	≥ 5 - < 10 weight-%
CAS No.: 95-14-7 EC No.: 202-394-1 REACH No.: 01-2119979079-20-XXXX	benzotriazole Acute Tox. 4 (H302), Aquatic Chronic 2 (H411), Eye Irrit. 2 (H319) Warning	≥ 5 - < 10 weight-%
CAS No.: 112-34-5 EC No.: 203-961-6 Index No.: 603-096-00-8 REACH No.: 01-2119475104-44-0006	2-(2-butoxyethoxy)ethanol Eye Irrit. 2 (H319) ① Warning	≥ 1 - < 5 weight-%
CAS No.: 1310-58-3 EC No.: 215-181-3 REACH No.: 01-2119487136-33-0000	potassium hydroxide Acute Tox. 4 (H302), Eye Dam. 1 (H318), Met. Corr. 1 (H290), Skin Corr. 1A (H314) Danger	≥ 1 - < 2 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

Provide fresh air.In case of respiratory tract irritation, consult a physician.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:

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.

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Following ingestion:

Rinse mouth. Let 1 glass of water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell.

Self-protection of the first aider:

Use personal protection equipment.

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

Skin corrosion/irritation Serious eye damage/eye irritation

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Foam Extinguishing powder Carbon dioxide (CO2) Water mist

Unsuitable extinguishing media:

Strong water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8).

All work processes must always be designed so that the following is as low as possible:

Inhalation, Skin contact, Eye contact

Always close containers tightly after the removal of product.

Environmental precautions:

Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

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

Storage class (TRGS 510, Germany): 10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

Empfohlene Lagerungstemperatur 5-30 storage stability max. 12 Monate

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	 Long-term occupational exposure limit value Short-term occupational exposure limit value Instantaneous value Monitoring and observation processes Remark
TRGS 900 (DE) from 1 Mar 2011	2-(2-butoxyethoxy)ethanol CAS No.: 112-34-5 EC No.: 203-961-6	① 10 ppm (67 mg/m³) ② 15 ppm (100.5 mg/m³) ⑤ (Aerosol und Dampf) EU, DFG, Y, 11
IOELV (EU)	2-(2-butoxyethoxy)ethanol CAS No.: 112-34-5 EC No.: 203-961-6	① 10 ppm (67.5 mg/m³) ② 15 ppm (101.2 mg/m³)
TRGS 900 (DE)	Poly(oxy-1,2-ethanediyl),?-hydro-?- hydroxy- Ethane-1,2-diol, ethoxylated CAS No.: 25322-68-3 EC No.: 500-038-2	① 1,000 mg/m³ ② 8,000 mg/m³ ⑤ DFG, Y
DFG (DE) from 1 Jul 2019	Poly(oxy-1,2-ethanediyl),?-hydro-?- hydroxy- Ethane-1,2-diol, ethoxylated CAS No.: 25322-68-3 EC No.: 500-038-2	① 250 mg/m³ ② 500 mg/m³ ⑤ (einatembare Fraktion) PEG
TRGS 900 (DE) from 7 Jun 2018	2,2',2''-nitrilotriethanol CAS No.: 102-71-6 EC No.: 203-049-8	① 1 mg/m³ ② 1 mg/m³ ⑤ (einatembare Fraktion) DFG, Y

8.1.2. Biological limit values

No data available

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8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type
		② Exposure route
1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7	42 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	19 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	1.08 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	1 mg/m³	① DNEL worker ② Acute - inhalation, local effects

Substance name	PNEC Value	① PNEC type
1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7	0.1 mg/L	① PNEC aquatic, freshwater
1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7	0.01 mg/L	① PNEC aquatic, marine water
1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7	10 mg/L	① PNEC sewage treatment plant
1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7	0.38 mg/kg	① PNEC sediment, freshwater
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	0.0194 mg/L	① PNEC aquatic, freshwater
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	0.0194 mg/L	① PNEC aquatic, marine water
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	39.4 mg/L	① PNEC sewage treatment plant
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	0.00375 mg/ kg	① PNEC sediment, freshwater
benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1	0.00375 mg/ kg	① PNEC sediment, marine water

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment







Eye/face protection:

Eye glasses with side protection EN 166

Skin protection:

Tested protective gloves must be worn EN ISO 374 Suitable material: Breakthrough time: min In the case of wanting to use the gloves again, clean them before taking off and air them well. Breakthrough times and swelling properties of the material must be taken into consideration.

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Respiratory protection:

Usually no personal respirative protection necessary. Respiratory protection necessary at: aerosol or mist formation insufficient ventilation

Other protection measures:

Do not put any product-impregnated cleaning rags into your trouser pockets.

Draw up and observe skin protection programme. Before starting work, apply water-resistant skincare preparations. Avoid contact with skin, eyes and clothes.

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Colour: yellow Physical state: Liquid

Odour: characteristic Safety relevant basis data

Parameter	Value	at °C	① Method
			② Remark
рН	8.9	20 °C	① DIN 51369
			② 5%-ig
Melting point	not determined		
Freezing point	not determined		
Initial boiling point and boiling range	> 100 °C		
Decomposition temperature	not determined		
Flash point	> 100 °C		① DIN EN ISO 2592
Evaporation rate	not determined		
Auto-ignition temperature	not determined		
Upper/lower flammability or explosive limits	not determined		
Vapour pressure	not determined		
Vapour density	not determined		
Density	1.158 g/cm³	15 °C	① DIN EN ISO 12185
Relative density	not determined		
Bulk density	not determined		
Water solubility	not determined		
Partition coefficient: n-octanol/water	not determined		
Dynamic viscosity	not determined		
Kinematic viscosity	18 mm²/s	20 °C	① DIN EN ISO 3104

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no data available on the mixture itself.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Acid

10.4. Conditions to avoid

No data available

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10.5. Incompatible materials

Oxidising agent, strong

Acid

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7

LD₅₀ oral: >2,000 mg/kg (Rat)

benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1

LD₅₀ oral: 560 mg/kg (Ratte) LD₅₀ dermal: 1,000 mg/kg (Ratte)

2-(2-butoxyethoxy)ethanol CAS No.: 112-34-5 EC No.: 203-961-6

LD₅₀ oral: 3,384 mg/kg (Rat) LD₅₀ dermal: 2,764 mg/kg (Rabbit)

potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3

LD₅₀ oral: 273 mg/kg (Rat)

Acute oral toxicity:

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

Acute dermal toxicity:

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

Acute inhalation toxicity:

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

Skin corrosion/irritation:

Causes skin irritation.

Serious eve damage/irritation:

Causes serious eve irritation.

Respiratory or skin sensitisation:

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

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:

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

STOT-single exposure:

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

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.

Additional information:

No data available

11.2. Information on other hazards

No data available

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SECTION 12: Ecological information

12.1. Toxicity

1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7

LC₅₀: >100 mg/L (fish, Pimephales promelas (fathead minnow))

EC₅₀: >100 mg/L (Algae/water plant, Desmodesmus subspicatus) OECD 202

LC₅₀: >100 mg/L (Pimephales promelas (fathead minnow)) OECD 203

 EC_{50} : >100 mg/L

benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1

LC50: 180 mg/L 4 d (fish, Danio rerio (zebrafish)) OECD 203

EC50: 15.8 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202

EC₅₀: 75 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201

2-(2-butoxyethoxy)ethanol CAS No.: 112-34-5 EC No.: 203-961-6

LC₅₀: 1,300 mg/L 4 d (fish, Lepomis macrochirus (Bluegill))

EC₅₀: >100 mg/L 2 d (crustaceans, Daphnia magna, Desmodesmus subspicatus (Großer Wasserfloh))

EC₅₀: >100 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))

potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3

LC50: 80 mg/L 4 d (Gambusia affinis (Mosquito fish)) OECD 203

LC₅₀: 80 mg/L 4 d (Gambusia affinis (Mosquito fish))

Aquatic toxicity:

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

2-(2-butoxyethoxy)ethanol CAS No.: 112-34-5 EC No.: 203-961-6

Biodegradation: Yes, rapidly

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

1-Phenoxy-2-propan-2-ol CAS No.: 770-35-4 EC No.: 212-222-7

Results of PBT and vPvB assessment: -

benzotriazole CAS No.: 95-14-7 EC No.: 202-394-1

Results of PBT and vPvB assessment: —

2-(2-butoxyethoxy)ethanol CAS No.: 112-34-5 EC No.: 203-961-6

Results of PBT and vPvB assessment: -

potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3

Results of PBT and vPvB assessment: -

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV Waste code product

12 01 10 * synthetic machining oils

^{*:} Evidence for disposal must be provided.

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Remark:

Waste codes/waste designations according to EWC/AVV

Waste code packaging

Remark:

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Non-contaminated packages may be recycled. Contaminated packages must be completely emptied and can be re-used following proper cleaning. Packing which cannot be properly cleaned must be disposed of.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)	
14.1. UN number or ID	number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	
14.2. UN proper shipp	ing name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	
14.3. Transport hazard	class(es)			
not relevant	not relevant	not relevant	not relevant	
14.4. Packing group				
not relevant	not relevant	not relevant	not relevant	
14.5. Environmental hazards				
not relevant	not relevant	not relevant	not relevant	
14.6. Special precaution	14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant	

14.7. Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Use restriction according to REACH annex XVII, no.: 3, 40 ,55, 75

15.1.2. National regulations

[DE] National regulations

Water hazard class

WGK:

1 - slightly hazardous to water

15.2. Chemical Safety Assessment

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

ACGIH American Conference of Governmental Industrial Hygienists

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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

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging

DIN German Institute for Standardization / German Industrial Standard

DNEL derived no-effect level

EC₅₀ Effective Concentration 50%

EN European Standard ES Exposure scenario

EWC European Waste Catalogue

ICAO International Civil Aviation Organization
 IMDG International Maritime Dangerous Goods
 IMO International Maritime Organization
 ISO International Standards Organisation

KG body weight

LC₅₀ Lethal (fatal) Concentration 50%

LD₅₀ Lethal (fatal) Dose 50%

MAK Maximum concentration in the workplace air (CH)

NFPA National Fire Protection Association

NIOSH National Institute for Occupational Safety & Health

OECD Organisation for Economic Cooperation and Development

PBT persistent and bioaccumulative and toxic

PNEC Predicted No Effect Concentration

REACH Registration, Evaluation and Authorization of Chemicals RID Dangerous goods regulations for transport by rail

TRGS Technische Regeln für Gefahrstoffe

UN United Nations

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (Skin Irrit. 2)	H315: Causes skin irritation.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	
Hazardous to the aquatic environment (Aquatic Chronic 3)	H412: Harmful to aquatic life with long lasting effects.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

	in the product of the second o
Hazard statements	
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

No data available