

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

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## Mabanol Helium Biohyd HLP E 46

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

#### 1.1. Product identifier

Trade name/designation:

Mabanol Helium Biohyd HLP E 46

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

Use of the substance/mixture:

hydraulic fluid

#### \* 1.3. Details of the supplier of the safety data sheet

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

Mabanol GmbH & Co. KG

Koreastraße 7  
20457 Hamburg  
Germany

Telephone: 0049 (0) 40 36809988

E-mail: info@mabanol.com

Website: www.mabanol.com

E-mail (competent person): giznord@giz-nord.de

#### \* 1.4. Emergency telephone number

Giftinformationszentrale Göttingen , 24h: 0049 (0) 551 1 92 40

### 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
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 components for labelling:

Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]; 2,6-di-tert-butylphenol; Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]

#### Hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

#### Supplemental hazard information

EUH208 Contains Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine,

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### Supplemental hazard information

N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]. May produce an allergic reaction.

### Precautionary statements Prevention

P273 Avoid release to the environment.

### Precautionary statements Disposal

P501 Dispose of contents/container to Dispose of waste according to applicable legislation..

### Additional information:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

### 2.3. Other hazards

No data available

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Description:

Mineral oil + Additive

#### Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 128-39-2 EC No.: 204-884-0 REACH No.: 01-2119490822-33	<b>2,6-di-tert-butylphenol</b> Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Skin Irrit. 2 (H315) ⚠️ Warning	0.3 - < 0.5 weight-%
CAS No.: 68411-46-1 EC No.: 270-128-1 REACH No.: 01-2119491299-23	<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> Aquatic Chronic 3 (H412), Repr. 2 (H361f) ⚠️ Warning	0.3 - < 0.5 weight-%
EC No.: 939-700-4 REACH No.: 01-2119982395-25	<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> Aquatic Acute 1 (H400), Aquatic Chronic 2 (H411), Skin Irrit. 2 (H315), Skin Sens. 1B (H317) ⚠️ Warning	0.1 - < 0.2 weight-%
EC No.: 947-263-6 REACH No.: 01-2120761103-66	<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl) dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> Aquatic Chronic 4 (H413), Repr. 2 (H361), Skin Irrit. 2 (H315) ⚠️ Warning	0.1 - < 0.2 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).

#### Following inhalation:

Remove casualty to fresh air and keep warm and at rest. When in doubt or if symptoms are observed, get medical advice.

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### In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. In case of skin irritation, consult a physician.

### After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

### Following ingestion:

Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunk in little sips (dilution effect). Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

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

Observe risk of aspiration if vomiting occurs.

### 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 (CO<sub>2</sub>). Sand.  
In case of major fire and large quantities: Water spray jet. Water mist.

#### Unsuitable extinguishing media:

Full water jet.

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

Burning produces heavy smoke.

#### Hazardous combustion products:

In case of fire may be liberated: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

### 5.3. Advice for firefighters

Do not inhale explosion and combustion gases. 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. Co-ordinate fire-fighting measures to the fire surroundings.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

##### Personal precautions:

Use personal protection equipment. Ventilate affected area. Special danger of slipping by leaking/spilling product.

#### 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. Do not allow to enter into soil/subsoil. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

#### For cleaning up:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

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### 6.4. Reference to other sections

No information available.

## 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). Avoid: Generation/formation of mist. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

##### Fire prevent measures:

Usual measures for fire prevention. Keep away from sources of ignition - No smoking.  
Fire class: B (Fires of liquids or liquid turning substances).

#### Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin. Wash hands before breaks and after work. Apply skin care products after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Used working clothes should not be worn outside the work area. Wash contaminated clothing before reuse.

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

#### Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Only use containers specifically approved for the substance/product.

#### Hints on storage assembly:

Do not store together with: Gas. Explosives. P8 OXIDISING LIQUIDS AND SOLIDS. Radioactive substances. Infectious substances.

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

#### Further information on storage conditions:

Temperature control required. Keep container tightly closed.  
Protect against: Air. Light. UV-radiation/sunlight.

### 7.3. Specific end use(s)

No data available

## SECTION 8: Exposure controls/personal protection

### \* 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

No data available

#### 8.1.2. Biological limit values

No data available

#### 8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	70.61 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	20.9 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	11.25 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	6.75 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects

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Substance name	DNEL value	① DNEL type ② Exposure route
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	6.75 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.8 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.31 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.22 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.44 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.05 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	1.3 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.3 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects

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<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.4 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.2 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.2 mg/kg bw/day	① DNEL worker ② Long-term - oral, systemic effects
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No.: 947-263-6 ]</b> EC No.: 947-263-6	3.72 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No.: 947-263-6 ]</b> EC No.: 947-263-6	1.1 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects

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<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6	1.04 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6	0.625 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6	0.625 mg/kg bw/day	① DNEL worker ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	0.001 mg/L	① PNEC aquatic, freshwater
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	0.0001 mg/L	① PNEC aquatic, marine water
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	10 mg/kg	① PNEC sewage treatment plant
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	0.317 mg/kg	① PNEC sediment, freshwater
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	0.0317 mg/kg	① PNEC sediment, marine water
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	0.679 mg/kg	① PNEC soil
<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0	60 mg/kg	① PNEC secondary poisoning
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.034 mg/L	① PNEC aquatic, freshwater
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.003 mg/L	① PNEC aquatic, marine water
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	10 mg/L	① PNEC sewage treatment plant

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<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.446 mg/kg	① PNEC sediment, freshwater
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.045 mg/kg	① PNEC sediment, marine water
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	17.6 mg/kg	① PNEC soil
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1	0.8333 mg/kg	① PNEC secondary poisoning
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.001 mg/L	① PNEC aquatic, freshwater
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.0001 mg/L	① PNEC aquatic, marine water
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4	0.69 mg/L	① PNEC sewage treatment plant
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6	0.496 mg/L	① PNEC aquatic, freshwater



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Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ] EC No.: 947-263-6	0.05 mg/L	① PNEC aquatic, marine water
Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ] EC No.: 947-263-6	100 mg/L	① PNEC sewage treatment plant
Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ] EC No.: 947-263-6	3,772,830.55 mg/kg	① PNEC sediment, freshwater
Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ] EC No.: 947-263-6	377,283.06 mg/kg	① PNEC sediment, marine water
Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ] EC No.: 947-263-6	3,935,351.65 mg/kg	① PNEC soil
Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ] EC No.: 947-263-6	5 mg/kg	① PNEC secondary poisoning

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Provide adequate ventilation.

#### 8.2.2. Personal protection equipment



#### Eye/face protection:

Safety goggles with side protection. In case of increased risk add protective face shield. DIN EN 166.

#### Skin protection:

Tested protective gloves must be worn (EN ISO 374).

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Suitable material: NBR (Nitrile rubber). CR (polychloroprene, chloroprene rubber). FKM (fluoro rubber). Breakthrough times and swelling properties of the material must be taken into consideration. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable protective clothing: flame-resistant.

### Respiratory protection:

Usually no personal respiratory protection necessary.

Respiratory protection necessary at: exceeding exposure limit values. aerosol or mist formation. Suitable respiratory protection apparatus: Filtering device (full mask or mouthpiece) with filter: A2, A2/P2, ABEK.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

### 8.2.3. Environmental exposure controls

No information available.

### 8.3. Additional information

air limit values:

Possibility of exposure to Aerosols (Mineral oil)

Limit value (TLV-TWA) = 5 mg/m<sup>3</sup> (Source: ACGIH)

Limit value (TLV-STEL) = 10 mg/m<sup>3</sup> (Source: ACGIH)

## SECTION 9: Physical and chemical properties

### \* 9.1. Information on basic physical and chemical properties

#### Appearance

Physical state: Liquid

Colour: clear

Odour: not determined

#### Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	No data available		
Melting point	No data available		
Freezing point	No data available		
Initial boiling point and boiling range	No data available		
Flash point	287 °C		① COC
Evaporation rate	No data available		
Auto-ignition temperature	No data available		
Upper/lower flammability or explosive limits	No data available		
Vapour pressure	No data available		
Vapour density	No data available		
Density	0.9204 g/cm <sup>3</sup>	15 °C	① DIN 51757
Bulk density	not applicable		
Water solubility	No data available		
Dynamic viscosity	No data available		
Kinematic viscosity	46.98 mm <sup>2</sup> /s	40 °C	① EN ISO 3104
Pour point	-51 °C		① ASTM D 5985

### 9.2. Other information

No data available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

#### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4. Conditions to avoid

No information available.

#### 10.5. Incompatible materials

Oxidising agent, strong.

#### 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

##### Toxicological information

###### Acute Toxicity Estimate for Mixtures

ATE (oral): >2,000 mg/kg

ATE (dermal): >2,000 mg/kg

ATE (inhalation, vapour): >20 mg/L

ATE (inhalation, dust/mist): >5 mg/L

###### 2,6-di-tert-butylphenol CAS No.: 128-39-2 EC No.: 204-884-0

LD<sub>50</sub> oral: >5,000 mg/kg (Rat) OECD 401

LD<sub>50</sub> dermal: >2,000 mg/kg (Rat)

###### Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4] EC No.: 939-700-4

LD<sub>50</sub> oral: >3,313 mg/kg (Rat)

LD<sub>50</sub> dermal: >2,000 mg/kg (Rat)

###### Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6] EC No.: 947-263-6

LD<sub>50</sub> oral: >2,000 mg/kg (Rat) OECD 423

###### Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1

LD<sub>50</sub> oral: >5,000 mg/kg (Rat) OECD 401

LD<sub>50</sub> dermal: >2,000 mg/kg (Rat) OECD 402

#### 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:

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

#### Serious eye damage/irritation:

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

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### Respiratory or skin sensitisation:

Contains Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]. May produce an allergic reaction.

May cause sensitisation especially in sensitive humans.

### 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:

Frequently or prolonged contact with skin may cause dermal irritation.

### \* 11.2. Information on other hazards

#### Endocrine disrupting properties:

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

## SECTION 12: Ecological information

### \* 12.1. Toxicity

<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0
LC <sub>50</sub> : 1.4 mg/L 4 d (fish, Pimephales promelas (fathead minnow))
EC <sub>50</sub> : 0.45 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))
NOEC: 0.023 mg/L 21 d (crustaceans, Daphnia magna (Big water flea))
ErC <sub>50</sub> : 1.4 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4
LC <sub>50</sub> : 1.1 - 1.6 mg/L 4 d (fish, Danio rerio (zebrafish))
EC <sub>50</sub> : 2.05 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))
ErC <sub>50</sub> : 0.976 mg/L 3 d (Algae/water plant, Desmodesmus subspicatus)
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6]</b> EC No.: 947-263-6
LC <sub>50</sub> : >1,000 mg/L 4 d (fish, Oncorhynchus mykiss (Rainbow trout)) OECD 203
ErC <sub>50</sub> : 370 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1
LC <sub>50</sub> : >100 mg/L (fish, Danio rerio (zebrafish)) OECD 203
EC <sub>50</sub> : >100 mg/L (Algae/water plant, Desmodesmus subspicatus) OECD 201
ErC <sub>50</sub> : 51 mg/L (crustaceans, Daphnia magna (Big water flea)) OECD 202

### Aquatic toxicity:

Harmful to aquatic life with long lasting effects.

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### \* 12.2. Persistence and degradability

<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0
<b>Biodegradation:</b> —
<b>Remark:</b> Not readily biodegradable (according to OECD criteria)
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4
<b>Biodegradation:</b> —
<b>Remark:</b> Not readily biodegradable (according to OECD criteria)
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6
<b>Biodegradation:</b> —
<b>Remark:</b> Not readily biodegradable (according to OECD criteria)
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1
<b>Biodegradation:</b> —
<b>Remark:</b> Not readily biodegradable (according to OECD criteria).

#### Biodegradation:

Biodegradable. (60% - Test duration 28 day(s)) Method: OECD 301F.

#### Additional information:

The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

### \* 12.3. Bioaccumulative potential

<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0
<b>Log K<sub>ow</sub>:</b> 4.5
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6
<b>Log K<sub>ow</sub>:</b> > 1.1
<b>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</b> CAS No.: 68411-46-1 EC No.: 270-128-1
<b>Log K<sub>ow</sub>:</b> 6.66
<b>Bioconcentration factor (BCF):</b> 4,176

#### Accumulation / Evaluation:

No indication of bioaccumulation potential.

### 12.4. Mobility in soil

No information available.

### \* 12.5. Results of PBT and vPvB assessment

<b>2,6-di-tert-butylphenol</b> CAS No.: 128-39-2 EC No.: 204-884-0
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl- and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl- and N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl- and N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine [EC-No.: 939-700-4]</b> EC No.: 939-700-4
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9-C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione [EC-No: 947-263-6 ]</b> EC No.: 947-263-6
<b>Results of PBT and vPvB assessment:</b> This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

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**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene** CAS No.: 68411-46-1  
EC No.: 270-128-1

**Results of PBT and vPvB assessment:** This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.  
The above statement applies to the substances contained in the product from 0.1%.

### \* 12.6. Endocrine disrupting properties

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 above statement applies to the substances contained in the product from 0.1%.

### 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### 13.1.1. Product/Packaging disposal

#### Waste codes/waste designations according to EWC/AVV

##### Waste code packaging

15 01 10 \* | packaging containing residues of or contaminated by dangerous substances

\*: Evidence for disposal must be provided.

#### 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. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN number or ID number</b>			
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.
<b>14.2. UN proper shipping name</b>			
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.
<b>14.3. Transport hazard class(es)</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.4. Packing group</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.5. Environmental hazards</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.6. Special precautions for user</b>			
not relevant	not relevant	not relevant	not relevant

### 14.7. Maritime transport in bulk according to IMO instruments

not relevant.

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### 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. 75.

###### Other regulations (EU):

This product is not assigned to a hazard category.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]: No information available.

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds: No information available.

Observe in addition any national regulations!

##### 15.1.2. National regulations

###### [DE] National regulations

###### Restrictions of occupation

To follow: § 22 JArbSchG.

###### Störfallverordnung (12. BImSchV)

###### for substances contained in the product:

This product is not assigned to a hazard category.

###### Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

###### Klasse 1:

5.2.5: organic substances, to be indicated as total carbon at  $m \geq 0.50$  kg/h: conc. 50 mg/m<sup>3</sup>.

###### Anteil 1:

99 %

###### Water hazard class

###### WGK:

1 - slightly hazardous to water

###### Remark:

Self-classification (mixture; calculation rule).

#### 15.2. Chemical Safety Assessment

not applicable.

#### 15.3. Additional information

Regulation (EU) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals: not relevant.

Water hazard class (WGK): 1 (slightly hazardous to water).

### SECTION 16: Other information

#### \* 16.1. Indication of changes

1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.2.	Label elements
3.2.	Mixtures
7.1.	Precautions for safe handling
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
12.6.	Endocrine disrupting properties

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15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

### 16.2. Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (International Carriage of Dangerous Goods by Road)  
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen  
CAS Chemical Abstracts Service  
DNEL: Derived No Effect Level  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
LOAEL: Lowest observed adverse effect level  
LOAEC: Lowest observed adverse effect concentration  
LC<sub>50</sub>: Lethal concentration, 50 percent  
LD<sub>50</sub>: Lethal dose, 50 percent  
NIOSH: National Institute of Occupational Safety and Health  
NOAEL: No observed adverse effect level  
NOAEC: No observed adverse effect level  
NTP: National Toxicology Program  
N/A: not applicable  
OEL: Occupational Exposure limit (Arbeitsplatzgrenzwert)  
OSHA: Occupational Safety and Health Administration  
PEL: permissible exposure limit (Zulässiger Expositionsgrenzwert)  
PBT: persistent bioaccumulative toxic  
PNEC: predicted no effect concentration  
REL: Recommended exposure limit (Empfohlene Expositionsgrenze)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
SARA: Superfund Amendments and Reauthorization Act  
STEL: Short Term Exposure Limit (Kurzzeitgrenzwert) (15 min)  
SVHC: substance of very high concern  
TLV: Threshold Limit Values (Schwellwert Grenzwerte)  
TRGS Technische Regeln für Gefahrstoffe  
TSCA: Toxic Substances Control Act  
TWA: Time Weighted Average (Zeitlich gewichteter Mittelwert) (8 h)  
VOC: Volatile Organic Compounds  
vPvB: very persistent and very bioaccumulative  
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe  
WGK: Wassergefährdungsklasse

### 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
Hazardous to the aquatic environment (Aquatic Chronic 3)	H412: Harmful to aquatic life with long lasting effects.	



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### \* 16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.
H361f	Suspected of damaging fertility.
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.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

### 16.6. Training advice

No data available

### 16.7. Additional information

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

health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

\* Data changed compared with the previous version.