

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.08.2019

Version number 8

Revision: 09.08.2019

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

1.1 Product identifier

- Trade name: **Transformer MAX**
- Article number: 12042, 12043, 12044

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

- Application of the substance / the mixture: Protective impregnation

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
- Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

Further information obtainable from:

Laboratory

1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.
+44 (171) 635 91 91
National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

The product is classified and labelled according to the CLP regulation.



GHS02



GHS07



GHS08

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<ul style="list-style-type: none"> · <u>Signal word</u> · <u>Hazard-determining components of labelling:</u> · <u>Hazard statements</u> · <u>Precautionary statements</u> · <u>Additional information:</u> · 2.3 Other hazards · <u>Results of PBT and vPvB assessment</u> · <u>PBT:</u> · <u>vPvB:</u> 	<p>Danger</p> <p>Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics</p> <p>H226 Flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.</p> <p>P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing vapours. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P331 Do NOT induce vomiting. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER/doctor if you feel unwell. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p> <p>EUH066 Repeated exposure may cause skin dryness or cracking.</p> <p>Not applicable. Not applicable.</p>
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SECTION 3: Composition/information on ingredients**3.2 Chemical characterisation: Mixtures**

· Description: Mixture: consisting of the following components.

· Dangerous components:

EC number: 927-241-2 Reg.nr.: 01-2119471843-32	Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 3, H412	25-50%
CAS: 5593-70-4 EINECS: 227-006-8 Reg.nr.: 01-2119967423-33	tetra-n-butoxytitanium Flam. Liq. 3, H226 Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335-H336	1-5%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X Reg.nr.: 01-2119433307-44	methanol Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370	<1%

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· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures**· 4.1 Description of first aid measures**

- General information: Take affected persons out of danger area and lay down. Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints. In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately rinse with water. If skin irritation continues, consult a doctor.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Rinse out mouth and then drink plenty of water. If symptoms persist consult doctor.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures**· 5.1 Extinguishing media**

- Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents:

Water with full jet

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:
Carbon monoxide (CO)

· 5.3 Advice for firefighters

- Protective equipment: Mount respiratory protective device. Wear fully protective suit.
- Additional information Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures**· 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep receptacles tightly sealed.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Ensure good ventilation/exhaustion at the workplace.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Information about storage in one common storage facility:

Store away from foodstuffs.

Further information about storage conditions:

Protect from frost.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

Storage class:

3

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical facilities:**

No further data; see item 7.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:****67-56-1 methanol**

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
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DNELs**Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics**

Oral	DNEL (Langzeit-wiederholt)	125 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	300 mg/kg bw/day (ARB)
		300 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	900 mg/m ³ Air (ARB)
		1,500 mg/m ³ Air (BEV)

5593-70-4 tetra-n-butoxytitanium

Oral	DNEL (Langzeit-wiederholt)	3.75 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	37.5 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	127 mg/m ³ Air (ARB)
		38 mg/m ³ Air (BEV)

67-56-1 methanol

Oral	DNEL (Kurzzeit-akut)	8 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	8 mg/kg bw/day (BEV)

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Dermal	DNEL (Kurzzeit-akut)	40 mg/kg bw/day (ARB) 8 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	40 mg/kg bw/day (ARB) 8 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	260 mg/m ³ Air (ARB) 50 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	260 mg/m ³ Air (ARB) 50 mg/m ³ Air (BEV)

· PNECs

5593-70-4 tetra-n-butoxytitanium

PNEC (wässrig)	65 mg/l (KA)
	0.008 mg/l (MW)
	0.08 mg/l (SW)
	2.25 mg/l (WAS)
PNEC (fest)	0.017 mg/kg Trockengew (BO)
	0.007 mg/kg Trockengew (MWS)
	0.069 mg/kg Trockengew (SWS)

67-56-1 methanol

PNEC (wässrig)	100 mg/l (KA)
	15.4 mg/l (MW)
	154 mg/l (SW)
	1,540 mg/l (WAS)
PNEC (fest)	23.5 mg/kg Trockengew (BO)
	7.7 mg/kg Trockengew (MWS)
	570.4 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· Personal protective equipment:
· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

· Respiratory protection:

Short term filter device:
Filter A/P2
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:



Protective gloves

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
The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and

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· <u>Explosive properties:</u>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <u>Explosion limits:</u>	
<u>Lower:</u>	2.1 Vol %
<u>Upper:</u>	11.5 Vol %
· <u>Vapour pressure:</u>	Not determined.
· <u>Density at 20 °C:</u>	0.89 g/cm ³
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.
· <u>Evaporation rate</u>	Not determined.
· <u>Solubility in / Miscibility with water:</u>	Not miscible or difficult to mix.
· <u>Partition coefficient: n-octanol/water:</u>	Not determined.
· <u>Viscosity:</u>	
<u>Dynamic:</u>	Not determined.
<u>Kinematic:</u>	Not determined.
· <u>Solvent content:</u>	
<u>Organic solvents:</u>	40.4 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4 h	634 mg/l (rat)
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Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics

Oral	LD50	4,951 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	4,951 mg/l (rat)

5593-70-4 tetra-n-butoxytitanium

Oral	LD50	3,122 mg/kg (rat)
Inhalative	LC50/4 h	11 mg/l (rat)

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67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
Inhalative	LC50/4 h	128.2 mg/l (rat)

- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- 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 May cause drowsiness or dizziness.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard May be fatal if swallowed and enters airways.

SECTION 12: Ecological information· **12.1 Toxicity**· Aquatic toxicity:**Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics**

EL50/48h	>22-<46 mg/l (daphnia magna)
EL50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata)
LL50/96h	>10-<30 mg/l (Oncorhynchus mykiss)

67-56-1 methanol

IC50	>1,000 mg/l (BES)
EC50/48h	>10,000 mg/l (daphnia magna)
LC50/96h	13,500-17,600 mg/l (Iem) 19,500-20,700 mg/l (Oncorhynchus mykiss) 28,200 mg/l (pimephales promelas)

· **12.2 Persistence and degradability**

No further relevant information available.

· **12.3 Bioaccumulative potential**

No further relevant information available.

· **12.4 Mobility in soil**

No further relevant information available.

· Additional ecological information:· General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

· **12.5 Results of PBT and vPvB assessment**· PBT:

Not applicable.

· vPvB:

Not applicable.

· **12.6 Other adverse effects**

No further relevant information available.

SECTION 13: Disposal considerations· **13.1 Waste treatment methods**· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packaging:· Recommendation:

Disposal must be made according to official regulations.

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SECTION 14: Transport information**· 14.1 UN-Number**

· ADR, IMDG, IATA UN1993

· 14.2 UN proper shipping name

· ADR 1993 FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics, METHANOL)

· IMDG, IATA FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics, METHANOL)

· 14.3 Transport hazard class(es)

· ADR



· Class 3 (F1) Flammable liquids.

· Label 3

· IMDG, IATA



· Class 3 Flammable liquids.

· Label 3

· 14.4 Packing group

· ADR, IMDG, IATA III

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler): 30

· EMS Number: F-E, S-E

· Stowage Category A

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

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 5L

· Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· Transport category 3

· Tunnel restriction code D/E

· IMDG

· Limited quantities (LQ) 5L

· Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

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· <u>UN "Model Regulation":</u>	UN 1993 FLAMMABLE LIQUID, N.O.S. (HYDROCARBONS, C9-C10, N-ALKANES, ISOALKANES, CYCLOALKANES, <2% AROMATICS, METHANOL), 3, III
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SECTION 15: Regulatory information**· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.
- Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- VOC EU 359.7 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

- Relevant phrases H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H370 Causes damage to organs.
H412 Harmful to aquatic life with long lasting effects.
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann
- 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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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