

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2017

Reviewed on 05/22/2017

1 Identification

Product identifier

Trade name: **Transformer Exotic**

Article number: 12056, 12057, 12058

Application of the substance / the mixture: Protective impregnation

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
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Information department: Laboratory

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.

2 Hazard(s) identification

Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

Label elements

GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS02

Signal word

Warning

Hazard-determining components of labeling:

Not applicable.

Hazard statements

H226 Flammable liquid and vapor.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

	Health = 0 Fire = 2 Reactivity = 0
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HMIS-ratings (scale 0 - 4)

	Health = 0 Fire = 2 Reactivity = 0
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Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 34396-03-7 EINECS: 251-995-5	Trimethoxy (2,4,4-trimethylpentyl) silane ⚠ Acute Tox. 4, H332	<10%
CAS: 3648-18-8 EINECS: 222-883-3	Diocetyl tin dilaurate ⚠ Repr. 2, H361; STOT SE 2, H371	<1%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X	methanol ⚠ Flam. Liq. 2, H225 ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 ⚠ STOT SE 1, H370	<1%

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

4 First-aid measures

Description of first aid measures

- General information:** Take affected persons out of danger area and lay down.
- After inhalation:** Take affected persons into fresh air and keep quiet. 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 wash with water and soap and rinse thoroughly. 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. Do not induce vomiting; immediately call for medical help.
- Information for doctor:**
- Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- Extinguishing media**
- Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents:** Water with full jet
Water
- Special hazards arising from the substance or mixture** In case of fire, the following can be released:
Carbon monoxide (CO)
- Advice for firefighters**
- Protective equipment:** Wear fully protective suit.
Wear self-contained respiratory protective device.
- Additional information** Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

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6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.

· Environmental precautions:

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

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· Reference to other sections

Do not flush with water or aqueous cleansing agents
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· <u>PAC-1:</u>		
67-56-1	methanol	530 ppm
· <u>PAC-2:</u>		
67-56-1	methanol	2,100 ppm
· <u>PAC-3:</u>		
67-56-1	methanol	7200* ppm

7 Handling and storage

· Handling:

· Precautions for safe handling

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

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Traces of flammable substances may collect in the steam chamber of enclosed systems. Keep ignition sources clear.

· Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Prevent any seepage into the ground.

· Information about storage in one common storage facility:

Store away from foodstuffs.

· Further information about storage conditions:

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

· Storage class:

3

· Specific end use(s)

No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems:

No further data; see item 7.

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Control parameters

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

67-56-1 methanol

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

Ingredients with biological limit values:

67-56-1 methanol

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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Additional information:

The lists that were valid during the creation were used as basis.

Exposure controls

- Personal protective equipment:
- General protective and hygienic measures:
- Breathing equipment:
- Protection of hands:

Wash hands before breaks and at the end of work.

Short term filter device:
Filter A/P2

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 verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

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 selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Material of gloves

Penetration time of glove material

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- For the permanent contact gloves made of the following materials are suitable: Butyl rubber, BR
- As protection from splashes gloves made of the following materials are suitable: Butoject (KCL, Art_No. 897, 898)
Butyl rubber, BR
- Not suitable are gloves made of the following materials: Strong gloves
Synthetic gloves
Nitrile rubber, NBR
- Eye protection:  Tightly sealed goggles
- Body protection: Solvent resistant protective clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· General Information

· Appearance:

- Form: Liquid
- Color: Opaque
- Odor: Light
- Odor threshold: Not determined.

· pH-value: Not determined.

· Change in condition

- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: > 190 °C (> 374 °F)

· Flash point: 42 °C (108 °F)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature:

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

- Lower: Not determined.
- Upper: Not determined.

· Vapor pressure: Not determined.

· Density at 20 °C (68 °F): 1.05 g/cm³ (8.762 lbs/gal)

· Specific gravity: Not determined.

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

· Water: Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

· Dynamic at 20 °C (68 °F): 19 mPas

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<u>Kinematic:</u>	Not determined.
· <u>Solvent content:</u>	
<u>Organic solvents:</u>	0.4 %
· <u>Solids content:</u>	68.2 %
· <u>Other information</u>	No further relevant information available.

* **10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Water
bases
Acids
- **Hazardous decomposition products:** Reacts with water forming methanol

* **11 Toxicological information**

- **Information on toxicological effects**
- Acute toxicity:
- LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)		
Oral	LD50	20000 mg/kg (rat)
Inhalative	LC50/4 h	112 mg/l (rat)

3648-18-8 Dioctyltin dilaurate		
Oral	LD50	6450 mg/kg (rat)

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- Carcinogenic categories
- IARC (International Agency for Research on Cancer)
- None of the ingredients is listed.
- NTP (National Toxicology Program)
- None of the ingredients is listed.
- OSHA-Ca (Occupational Safety & Health Administration)
- None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- Aquatic toxicity: No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- Bioaccumulative potential No further relevant information available.

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- Mobility in soil No further relevant information available.
- **Additional ecological information:**
- General notes: Water hazard class 2 (Self-assessment): hazardous for water
- **Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- Recommendation: Disposal must be made according to official regulations.

* **14 Transport information**

· UN-Number	
· <u>DOT, ADR, ADN, IMDG, IATA</u>	Void
· UN proper shipping name	
· <u>DOT, ADR, ADN, IMDG, IATA</u>	Void
· Transport hazard class(es)	
· <u>DOT, ADR, ADN, IMDG, IATA</u>	
· <u>Class</u>	Void
· Packing group	
· <u>DOT, ADR, IMDG, IATA</u>	Void
· Environmental hazards:	
· <u>Marine pollutant:</u>	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications. to handle similar to packing group II
· UN "Model Regulation":	Void

* **15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Sara

· <u>Section 355 (extremely hazardous substances):</u>	None of the ingredient is listed.
· <u>Section 313 (Specific toxic chemical listings):</u>	
67-56-1	methanol
· <u>TSCA (Toxic Substances Control Act):</u>	
	All ingredients are listed.

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· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 | methanol

· Carcinogenicity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS02

· Signal word

Warning

· Hazard statements

H226 Flammable liquid and vapor.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

· Information about limitation of use: Employment restrictions concerning young persons must be observed.

· Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· VOC USA 4.1 g/l / 0.03 lb/gal

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Department issuing SDS:** Laboratory

· **Contact:** Dieter Zimmermann

· **Date of preparation / last revision** 05/22/2017 / 2

· **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
 DOT: US Department of Transportation
 IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Repr. 2: Reproductive toxicity – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

US