

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

· Product identifier

- Trade name: **Darkener Super**
- Article number: 10940, 10941, 10939, 10943
- Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the preparation 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
- Further information obtainable from: 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 Hazards identification

· 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

STOT SE 3 H336 May cause drowsiness or dizziness.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R65: Harmful: may cause lung damage if swallowed.

R10-66-67: Flammable. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

- Information concerning particular hazards for human and environment:

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Has a narcotizing effect.

- Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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Label elements**Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

Xn Harmful

Hazard-determining components of labelling:

Naphtha (petroleum), hydrotreated heavy

Risk phrases:

10 Flammable.
65 Harmful: may cause lung damage if swallowed.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

Safety phrases:

2 Keep out of the reach of children.
23 Do not breathe fumes.
24/25 Avoid contact with skin and eyes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
38 In case of insufficient ventilation, wear suitable respiratory equipment.
46 If swallowed, seek medical advice immediately and show this container or label.
51 Use only in well-ventilated areas.











Other hazards**Results of PBT and vPvB assessment**

· PBT: Not applicable.
· vPvB: Not applicable.

3 Composition/information on ingredients**Chemical characterization: Mixtures**

· Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 64742-48-9 EINECS: 265-150-3 Index number: 649-327-00-6	Naphtha (petroleum), hydrotreated heavy  Xn R65 R10-66-67 -----  Flam. Liq. 3, H226;  Asp. Tox. 1, H304;  STOT SE 3, H336	50-100%
CAS: 34396-03-7	Trimethoxy (2,4,4-trimethylpentyl)silan R10-52/53 -----  Flam. Liq. 3, H226; Aquatic Chronic 3, H412	<12.5%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X	methanol  T R23/24/25-39/23/24/25;  F R11 -----  Flam. Liq. 2, H225;  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT SE 1, H370	<1%

Regulation (EC) No 648/2004 on detergents / Labelling for contents

aliphatic hydrocarbons

≥ 30%

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

4 First aid measures**· Description of first aid measures**

- General information: Take affected persons out into the fresh air.
Position and transport stably in side position.
Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: If skin irritation continues, consult a doctor.
- After eye contact: Immediately wash with water and soap and rinse thoroughly.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor: Symptoms in intoxication with (aromatic) hydrocarbons (dosis letalis about 30 g)
a) In acute intoxication: headache, dizziness, euphoria, gastro-intestinal dysfunction, state of excitement, coma.
b) In chronic intoxication: myelotoxic damage, fatigue, dizziness, emaciation, cardiac palpitation after physical exercise, leucopenia, anemia, leukosis.
Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of cramps administration of Diazepam 20 mg intravenously.
- Most important symptoms and effects, both acute and delayed Breathing difficulty
Headache
Dizziness
Dizziness
Nausea
Profuse sweating
Danger of impaired breathing.
- Hazards
- Indication of any immediate medical attention and special treatment needed If swallowed, gastric irrigation with added, activated carbon.

5 Firefighting measures

- **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
- **Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide (CO)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- Protective equipment: Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
Wear self-contained respiratory protective device.
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
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**

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

· **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).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Use only in well ventilated areas.
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

· **Information about fire - and explosion protection:**

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

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.
Prevent any seepage into the ground.

· **Information about storage in one common storage facility:**

Store away from oxidizing agents.
Store away from foodstuffs.

· **Further information about storage conditions:**

Store receptacle in a well ventilated area.
Keep container tightly sealed.

* 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:**

No further data; see item 7.

· **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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- Additional information: The lists valid during the making were used as basis.
 - **Exposure controls**
 - Personal protective equipment:
 - General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.
Apply solvent resistant skin cream before starting work.
Use skin protection cream for skin protection.
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.
 - Respiratory protection:

Filter AX
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:

Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Akemi skin protection agent recommendation for preventive skin shelter without use of protective gloves:
STOKODERM (<http://www.stoko.com>)
Akemi skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
STOKO EMULSION (<http://www.stoko.com>)
Akemi skin protection recommendation for skin cleaning after product handling:
FRAPANTOL (<http://www.stoko.com>)
Akemi skin protection agent recommendation for skin aftercare:
STOKO VITAN (<http://www.stoko.com>)
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>).
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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
- Material of gloves


Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
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.
 - Penetration time of glove material Value for the permeation: Level \geq 6, 480 min

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- The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- For the permanent contact gloves made of the following materials are suitable:
 - Fluorocarbon rubber (Viton)
 - Vitoject (KCL, Art No. 890)
 - Nitrile rubber, NBR
 - Camatril (KCL, Art No. 730, 731, 732, 733)
 - As protection from splashes gloves made of the following materials are suitable:
 - Nitrile rubber, NBR
 - Camatril (KCL, 730, 731, 732, 733)
 - Not suitable are gloves made of the following materials:
 - Leather gloves
 - Strong material gloves
 - Eye protection:



Tightly sealed goggles
 - Body protection:
 - Protective work clothing

9 Physical and chemical properties**· Information on basic physical and chemical properties**· General Information· Appearance:

<u>Form:</u>	Fluid
<u>Colour:</u>	Colourless
<u>Odour:</u>	Characteristic

· pH-value: Not applicable· Change in condition

<u>Melting point/Melting range:</u>	Undetermined.
<u>Boiling point/Boiling range:</u>	180°C

· Flash point: > 40°C· Ignition temperature: 240°C· Self-igniting: Product is not selfigniting.· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.· Explosion limits:

<u>Lower:</u>	0.6 Vol %
<u>Upper:</u>	7.0 Vol %

· Vapour pressure at 20°C: 1 hPa· Density at 20°C: 0.85 g/cm³· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· Viscosity:

<u>Dynamic:</u>	Not determined.
<u>Kinematic at 20°C:</u>	11 s (DIN 53211/4)

· Solvent content:

<u>Organic solvents:</u>	59.8 %
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* 10 Stability and reactivity

· **Reactivity**

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· **Possibility of hazardous reactions**

Reacts with strong oxidizing agents.
Forms flammable gases/fumes.

· **Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

* 11 Toxicological information

· **Information on toxicological effects**

· Acute toxicity:

· LD/LC50 values relevant for classification:

64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rabbit)
Inhalative	LC50	>12 mg/l (rat)

· Primary irritant effect:

· on the skin:

No irritant effect.

· on the eye:

No irritating effect.

· Sensitization:

No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

* 12 Ecological information

· **Toxicity**

· Acquatic toxicity:

64742-48-9 Naphtha (petroleum), hydrotreated heavy

EC50	> 1000 mg/l (green alge)
	>1-<10 mg/l (bacteria)
	> 1000 mg/l (daphnia magna)
LC50	> 1000 mg/l (piscis)
LL50/96h	51 mg/l (rainbow trout)

· **Additional ecological information:**

· General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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

· **Results of PBT and vPvB assessment**

· PBT:

Not applicable.

· vPvB:

Not applicable.

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* **13 Disposal considerations**

· **Waste treatment methods**

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

· European waste catalogue

20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 13*	solvents

· **Uncleaned packaging:**

- Recommendation: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
- Recommended cleansing agents: Alcohol
acetone

* **14 Transport information**

· **Land transport ADR/RID (cross-border)**



- ADR/RID class: 3 (F1) Flammable liquids.
- Danger code (Kemler): 30
- UN-Number: 3295
- Packaging group: III
- Hazard label 3
- UN proper shipping name: 3295 HYDROCARBONS, LIQUID, N.O.S.
- Limited quantities (LQ) LQ7
- Transport category 3
- Tunnel restriction code D/E

· **Maritime transport IMDG:**



- IMDG Class: 3
- UN Number: 3295
- Label 3
- Packaging group: III
- EMS Number: F-E,S-D
- Marine pollutant: No
- Proper shipping name: HYDROCARBONS, LIQUID, N.O.S.

· **Air transport ICAO-TI and IATA-DGR:**



- ICAO/IATA Class: 3
- UN/ID Number: 3295
- Label 3

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- | | |
|--------------------------------|------------------------------|
| · <u>Packaging group:</u> | III |
| · <u>Proper shipping name:</u> | HYDROCARBONS, LIQUID, N.O.S. |
- **UN "Model Regulation":** UN3295, HYDROCARBONS, LIQUID, N.O.S., 3, III
- **Special precautions for user** Warning: Flammable liquids.

* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- National regulations:
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- VOC EU 505.0 g/l
- **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.

- 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.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.
H412	Harmful to aquatic life with long lasting effects.
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R10	Flammable.
R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
- Recommended restriction of use refer to Technical Data Sheet (TDS)
- **Department issuing MSDS:** Laboratory
- **Contact:** Dieter Zimmermann
Elke Hake
Fon ++49 (0)911 64296-59
@mail E.Hake@akemi.de
- 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)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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

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Safety data sheet
according to 1907/2006/EC, Article 31

AKEMI®

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Revision: 10.02.2011

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. * Data compared to the previous version altered.

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

Adaptation in accordance with REACH directive 1907/2006/EC

GB