

# Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

## 1 Identification

### · Product identifier

- Trade name: **Darkener Plus**
- Article number: 10991, 10992, 10993
- Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- 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
- 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 vapour.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

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



Harmful

Harmful: may cause lung damage if swallowed.

Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

### · Information concerning particular hazards for human and environment:

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

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**Trade name: Darkener Plus**

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Classification system: The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

**Label elements**

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

Hazard pictograms



GHS02 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling: Kohlenwasserstoffe, C4-, 1,3-Butadien-frei, polymerisiert, Triisobutylenfraktion, hydriert

Hazard statements Kohlenwasserstoffe, C10-C12, Isoalkane, <2% Aromaten  
 H226 Flammable liquid and vapour.  
 H361 Suspected of damaging fertility or the unborn child.  
 H336 May cause drowsiness or dizziness.  
 H304 May be fatal if swallowed and enters airways.

Precautionary statements

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/sparks/open flames/hot surfaces. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing vapours.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:  
NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)

HEALTH 0	Health = 0
FIRE 2	Fire = 2
REACTIVITY 0	Reactivity = 0

**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 the substances listed below with nonhazardous additions.

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· <u>Dangerous components:</u>		
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3	1-methoxy-2-propanol R10-67 Flam. Liq. 3, H226; STOT SE 3, H336	25-50%
CAS: 93685-81-5 EINECS: 297-629-8	Kohlenwasserstoffe, C4-, 1,3-Butadien-frei, polymerisiert, Triisobutylenfraktion, hydriert Xn R65 R10-53-66 Flam. Liq. 3, H226; Asp. Tox. 1, H304	12.5-25%
EC number: 923-037-2	Kohlenwasserstoffe, C10-C12, Isoalkane, <2% Aromaten Xn R65; N R51/53 R10-66 Flam. Liq. 3, H226; Asp. Tox. 1, H304	12.5-25%
CAS: 3648-18-8 EINECS: 222-883-3	Diöctylzinndilaurat T R48/25; Xn R63 R52/53 Repr. 2, H361; STOT RE 1, H372	<1%
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%

· 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: Immediately remove any clothing soiled by the product. Take affected persons out into the fresh air. Position and transport stably on side.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- 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: Do not induce vomiting; immediately call for medical help. Drink copious amounts of water and provide fresh air. Immediately call a 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 Danger of impaired breathing.

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- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Protect from heat.
- **Conditions for safe storage, including any incompatibilities**
- Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.  
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 in cool, dry conditions in well sealed receptacles.  
Keep receptacle tightly sealed.  
Protect from heat and direct sunlight.  
Store receptacle in a well ventilated area.
- **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.
- **Control parameters**

· Components with limit values that require monitoring at the workplace:

**107-98-2 1-methoxy-2-propanol**

REL	Short-term value: 540 mg/m <sup>3</sup> , 150 ppm Long-term value: 360 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 369 mg/m <sup>3</sup> , 100 ppm Long-term value: 184 mg/m <sup>3</sup> , 50 ppm

**67-56-1 methanol**

PEL	Long-term value: 260 mg/m <sup>3</sup> , 200 ppm
REL	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin
TLV	Short-term value: 328 mg/m <sup>3</sup> , 250 ppm Long-term value: 262 mg/m <sup>3</sup> , 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: The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Immediately remove all soiled and contaminated clothing.

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- Avoid contact with the eyes and skin.  
Do not inhale gases / fumes / aerosols.  
Do not eat, drink, smoke or sniff while working.  
Apply solvent resistant skin cream before beginning work.  
Use skin protection cream for skin protection.  
Use suitable respiratory protective device in case of insufficient ventilation.  
Filter AX
- Breathing equipment:
  - 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.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves
  - Penetration time of glove material
  - For the permanent contact gloves made of the following materials are suitable:
  - As protection from splashes gloves made of the following materials are suitable:
  - Not suitable are gloves made of the following materials:
- 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.  
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.  
Value for the permeation: Level  $\leq$  6, 480 min
- Fluorocarbon rubber (Viton)  
Vitoject (KCL, Art No. 890)  
Nitrile rubber, NBR  
Camatril (KCL, Art No. 730, 731, 732, 733)
- Nitrile rubber, NBR  
Camatril (KCL, 730, 731, 732, 733)
- Leather gloves  
Strong gloves

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· 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:

Form:	Fluid
Color:	Colorless
· <u>Odor:</u>	Characteristic

· pH-value: Not applicable

##### · Change in condition

<u>Melting point/Melting range:</u>	Undetermined.
<u>Boiling point/Boiling range:</u>	180 °C (356 °F)

· Flash point: > 40 °C (> 104 °F)

· Ignition temperature: 270 °C (518 °F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

##### · Explosion limits:

<u>Lower:</u>	2.3 Vol %
<u>Upper:</u>	7.0 Vol %

· Vapor pressure at 20 °C (68 °F): 12 hPa (9 mm Hg)

· Density at 20 °C (68 °F): 0.85 g/cm<sup>3</sup> (7.093 lbs/gal)

· Specific gravity at 20 °C (68 °F): 0.85 g/cm<sup>3</sup> (7.093 lbs/gal)

##### · Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

##### · Viscosity:

<u>Dynamic:</u>	Not determined.
<u>Kinematic at 20 °C (68 °F):</u>	11 s (DIN 53211/4)

##### · Solvent content:

Organic solvents: 59.6 %

Solids content: 29.8 %

· **Other information** No further relevant information available.

### \* 10 Stability and reactivity

#### · **Reactivity**

##### · Chemical stability

##### · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.  
No decomposition if used and stored according to specifications.

#### · **Possibility of hazardous reactions**

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

#### · **Conditions to avoid**

No further relevant information available.

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- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

**11 Toxicological information**· **Information on toxicological effects**

- Acute toxicity:
- 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 internally approved calculation methods for preparations:

· **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.

**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.· Mobility in soil No further relevant information available.· **Ecotoxicological effects:**· Remark: Harmful to fish· **Additional ecological information:**

· General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Harmful to aquatic organisms  
 Water hazard class 1 (Self-assessment): slightly 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: Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.· Recommended cleansing agent: Alcohol  
acetone

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**\* 14 Transport information**

<b>· UN-Number</b>	UN3295
<b>· DOT, ADR, IMDG, IATA</b>	
<b>· UN proper shipping name</b>	
<b>· DOT</b>	Hydrocarbons, liquid, n.o.s.
<b>· ADR</b>	3295 Hydrocarbons, liquid, n.o.s.
<b>· IMDG, IATA</b>	HYDROCARBONS, LIQUID, N.O.S.
<b>· Transport hazard class(es)</b>	
<b>· DOT, IMDG, IATA</b>	
<b>· Class</b>	3 Flammable liquids.
<b>· ADR</b>	
<b>· Class</b>	3 (F1) Flammable liquids
<b>· Packing group</b>	
<b>· ADR</b>	III
<b>· Environmental hazards:</b>	
<b>· Marine pollutant:</b>	No
<b>· Special precautions for user</b>	Warning: Flammable liquids
<b>· EMS Number:</b>	F-E,S-D
<b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>· UN "Model Regulation":</b>	UN3295, Hydrocarbons, liquid, n.o.s., 3, III

**\* 15 Regulatory information**

<b>· Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
<b>· Sara</b>	
<b>· Section 355 (extremely hazardous substances):</b>	
None of the ingredient is listed.	
<b>· Section 313 (Specific toxic chemical listings):</b>	
67-56-1	methanol
<b>· TSCA (Toxic Substances Control Act):</b>	
107-98-2	1-methoxy-2-propanol
64741-65-7	Naphtha (petroleum), heavy alkylate
3648-18-8	Dioctylzinndilaurat
67-56-1	methanol
<b>· Proposition 65</b>	
<b>· Chemicals known to cause cancer:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause developmental toxicity:</b>	
67-56-1	methanol

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· Cancerogenity 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.

· OSHA-Ca (Occupational Safety & Health Administration)

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 GHS07 GHS08

· Signal word

Danger

· Hazard-determining components of labeling:

Kohlenwasserstoffe, C4-, 1,3-Butadien-frei, polymerisiert, Triisobutylfraktion, hydriert

Kohlenwasserstoffe, C10-C12, Isoalkane, <2% Aromaten

H226 Flammable liquid and vapour.

H361 Suspected of damaging fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

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/sparks/open flames/hot surfaces. No smoking.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing vapours.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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.  
Employment restrictions concerning pregnant and lactating women must be observed.

· Water hazard class:

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

· VOC USA

503.5 g/l / 4.20 lb/gal

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

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**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 MSDS:** Laboratory
- **Contact:** Dieter Zimmermann
- **Date of preparation / last revision** 01/22/2014 / -
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organization
  - 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
  - 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)

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