

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

1 Identification

· Product identifier

- Trade name: **Darkener Super**
- Article number: 10940, 10941, 10939, 10943
- 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.

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



Harmful

Harmful: may cause lung damage if swallowed.



Dangerous for the environment

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

(Contd. on page 2)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 1)

Label elements· GHS label elements

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

· Hazard pictograms

GHS02 GHS08

· Signal word

Danger

· Hazard-determining components of labeling:

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

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

· Hazard statements

H226 Flammable liquid and vapour.

H361 Suspected of damaging fertility or the unborn child.

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.

P260 Do not breathe vapours.

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

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

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

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P405 Store locked up.

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

· HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 2

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.· Dangerous components:

(Contd. on page 3)

USA

Safety Data Sheet
















acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 2)

CAS: 93685-81-5 EINECS: 297-629-8	Kohlenwasserstoffe, C4-, 1,3-Butadien-frei, polymerisiert, Triisobutylfraktion, hydriert  Xn R65 R10-53-66  Flam. Liq. 3, H226;  Asp. Tox. 1, H304	25-50%
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	25-50%
CAS: 3648-18-8 EINECS: 222-883-3	Diocetylzinnilaurat  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: Take affected persons out into the fresh air.
Position and transport stably on side.
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.
- Danger
- Indication of any immediate medical attention and special treatment needed If swallowed, gastric irrigation with added, activated carbon.

(Contd. on page 4)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 3)

*** 5 Fire-fighting measures**

- **Extinguishing media**
- Suitable extinguishing agents: CO2, extinguishing 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)
In 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.

*** 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 protection against explosions and fires: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super (Contd. of page 4)

- **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 receptacle tightly sealed.
- **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:

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:

Do not eat, drink, smoke or sniff while working.
Apply solvent resistant skin cream before beginning 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.

· Breathing equipment:

Filter AX
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· 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>)

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 5)

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>).



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 \leq 6, 480 min

The exact break through 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 gloves

· Eye protection:



Tightly sealed goggles

(Contd. on page 7)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 6)

· **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>Color:</u>	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: 240 °C (464 °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>	0.6 Vol %
· <u>Upper:</u>	7.0 Vol %

· Vapor pressure at 20 °C (68 °F): 1 hPa (1 mm Hg)

· Density at 20 °C (68 °F): 0.85 g/cm³ (7.093 lbs/gal)

· Specific gravity at 20 °C (68 °F): 0.85 g/cm³ (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: 59.7 %

· 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 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.

· **Incompatible materials:**

No further relevant information available.

· **Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

(Contd. on page 8)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 7)

* **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

<u>IARC (International Agency for Research on Cancer)</u>	None of the ingredients is listed.
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<u>NTP (National Toxicology Program)</u>	None of the ingredients is listed.
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* **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.
- **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 (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

* **14 Transport information**

<u>UN-Number</u>	UN3295
<u>DOT, ADR, IMDG, IATA</u>	
<u>UN proper shipping name</u>	Hydrocarbons, liquid, n.o.s. (Diesel fuel)
<u>DOT</u>	

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 8)

· <u>ADR</u>	3295 Hydrocarbons, liquid, n.o.s. (Diesel fuel), ENVIRONMENTALLY HAZARDOUS
· <u>IMDG</u>	HYDROCARBONS, LIQUID, N.O.S. (DIESEL FUEL), MARINE POLLUTANT
· <u>IATA</u>	HYDROCARBONS, LIQUID, N.O.S. (DIESEL FUEL)

· **Transport hazard class(es)**

· DOT



· <u>Class</u>	3 Flammable liquids.
· <u>Label</u>	3

· ADR



· <u>Class</u>	3 (F1) Flammable liquids
· <u>Label</u>	3

· IMDG



· <u>Class</u>	3 Flammable liquids.
· <u>Label</u>	3

· IATA



· <u>Class</u>	3 Flammable liquids.
· <u>Label</u>	3

· **Packing group**

· DOT, ADR, IMDG, IATA	III
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· **Environmental hazards:**

· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)

· **Special precautions for user**

· Warning:	Warning: Flammable liquids
· Danger code (Kemler):	30
· EMS Number:	F-E,S-D

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **UN "Model Regulation":**

UN3295, Hydrocarbons, liquid, n.o.s. (Diesel fuel), ENVIRONMENTALLY HAZARDOUS, 3, III

(Contd. on page 10)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 9)

15 Regulatory information

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

- Sara

- Section 355 (extremely hazardous substances):

None of the ingredient is listed.

- Section 313 (Specific toxic chemical listings):

67-56-1 | methanol

- TSCA (Toxic Substances Control Act):

64741-65-7 | Naphtha (petroleum), heavy alkylate

3648-18-8 | Dioctylzinndilaurat

67-56-1 | methanol

- 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

- Carcinogenity 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 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.

H304 May be fatal if swallowed and enters airways.

- Hazard statements

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

(Contd. on page 11)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2014

Reviewed on 09/27/2013

Trade name: Darkener Super

(Contd. of page 10)

P102 Keep out of reach of children.
 P103 Read label before use.
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P260 Do not breathe vapours.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P304+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P405 Store locked up.
 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.
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 504.3 g/l / 4.21 lb/gl
- 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 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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