

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.07.2018

Version number 6

Revision: 20.07.2018

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

1.1 Product identifier

Trade name: **Duro Impregnator**

Article number: 12047, 12048

1.2 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

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.



GHS09 environment

Aquatic Chronic 2 H411 Toxic 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 GHS08 GHS09

Signal word

Danger

Hazard-determining components of labelling:

2,2,4,6,6-pentamethylheptan
Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

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- Hazard statements H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
- 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.
- **2.3 Other hazards**
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

- Description: Mixture: consisting of the following components.

· Dangerous components:

CAS: 13475-82-6 EINECS: 236-757-0 Reg.nr.: 01-2119490725-29	2,2,4,6,6-pentamethylheptan Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 4, H411	25-50%
EC number: 923-037-2 Reg.nr.: 01-2119471991-29-xxxx	Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	25-50%

- 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 into the fresh air.
Position and transport stably in side position.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: 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: If symptoms persist consult doctor.

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

Headache
Dizziness
Dizziness
Nausea

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- Information for doctor: Breathing difficulty
Coughing
Profuse sweating
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.
- Hazards Danger of impaired breathing.
- **4.3 Indication of any immediate medical attention and special treatment needed** If swallowed, gastric irrigation with added, activated carbon.
If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- Suitable extinguishing agents: CO₂, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents: Water
Water with full jet
- **5.2 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.
- **5.3 Advice for firefighters**
- Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
- 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.

SECTION 6: Accidental release measures

- **6.1 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.
- **6.2 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.
- **6.3 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.
Do not flush with water or aqueous cleansing agents

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- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.
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.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

- **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 only in the original receptacle.
Prevent any seepage into the ground.

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

Store away from oxidising agents.
Store away from foodstuffs.

- **Further information about storage conditions:**

Store receptacle in a well ventilated area.
Store in a cool place.
Protect from frost.
Keep container tightly sealed.

- **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:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
The lists valid during the making were used as basis.

- **Additional information:**

- **8.2 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.
Wash hands before breaks and at the end of work.

- **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.
Preventive skin protection by use of skin-protecting agents is recommended.

- **Protection of hands:**

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After use of gloves apply skin-cleaning agents and skin cosmetics.
Skin protection agent recommendation for preventive skin shelter without use of protective gloves:

STOKODERM (<http://www.stoko.com>)

Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (<http://www.stoko.com>)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (<http://www.stoko.com>)

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>).

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:

Fluorocarbon rubber (Viton)

Vitoject (KCL, Art_No. 890)

Nitrile rubber, NBR

Camatril (KCL, 730, 731, 732, 733)

· Not suitable are gloves made of the following materials:

Natural rubber, NR

Rubber gloves

Leather gloves

Strong material gloves

Neoprene gloves

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· Eye protection:

Tightly sealed goggles

· Body protection:

Protective work clothing

SECTION 9: Physical and chemical properties· **9.1 Information on basic physical and chemical properties**· General Information· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Specific type
Odour threshold:	Not determined.

· pH-value: Not applicable· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	173 °C

· Flash point: 43 °C· Flammability (solid, gas): Not applicable.· Decomposition temperature: Not determined.· Auto-ignition temperature: Product is not selfigniting.· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure: Not determined.· Density at 20 °C: 0.76 g/cm³· Relative density Not determined.· Vapour 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:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 91.7 %

· **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 and stored according to specifications.

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· **10.3 Possibility of hazardous reactions**

Reacts with strong oxidising agents.

Forms flammable gases/fumes.

· **10.4 Conditions to avoid**

No further relevant information available.

· **10.5 Incompatible materials:**

No further relevant information available.

· **10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

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:

13475-82-6 2,2,4,6,6-pentamethylheptan

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/8h	>5 ppm (rat)

Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/8h	>5 mg/l (rat)

· Primary irritant effect:

· Skin corrosion/irritation Based on available data, the classification criteria are not met.

· Serious eye damage/irritation Based on available data, the classification criteria are not met.

· 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 Based on available data, the classification criteria are not met.

· 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:

13475-82-6 2,2,4,6,6-pentamethylheptan

IC50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata)
EC50/48h	>1,000 mg/l (daphnia magna)
LC50/96h	>1,000 mg/l (Oncorhynchus mykiss)

Hydrocarbons, C10-C12, Isoalkanes, <2% aromatics

EL0/48h	1,000 mg/l (daphnia magna)
EL0/72h	1,000 mg/l (Pseudokirchneriella subcapitata)
LL0/96h	1,000 mg/l (Oncorhynchus mykiss)
NOELR/72h	1,000 mg/l (Pseudokirchneriella subcapitata)
NOELR/21d	<1 mg/l (daphnia magna)

· **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.

· Ecotoxicological effects:

· Remark:

Toxic for fish

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· Additional ecological information:· General notes:

Do not allow product to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Water hazard class 2 (German Regulation) (Self-assessment): 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:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

· Recommended cleansing agents:

Alcohol

SECTION 14: Transport information· **14.1 UN-Number**· ADR, IMDG, IATA

UN3295

· **14.2 UN proper shipping name**· ADR3295 HYDROCARBONS, LIQUID, N.O.S. mixture,
ENVIRONMENTALLY HAZARDOUS· IMDGHYDROCARBONS, LIQUID, N.O.S. mixture, MARINE
POLLUTANT· IATA

HYDROCARBONS, LIQUID, N.O.S. mixture

· **14.3 Transport hazard class(es)**· ADR· Class

3 (F1) Flammable liquids.

· Label

3

· IMDG· Class

3 Flammable liquids.

· Label

3

· IATA· Class

3 Flammable liquids.

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· <u>Label</u>	3
· 14.4 Packing group · <u>ADR, IMDG, IATA</u>	III
· 14.5 Environmental hazards: · <u>Marine pollutant:</u> · <u>Special marking (ADR):</u>	Product contains environmentally hazardous substances: Yes Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · <u>Danger code (Kemler):</u> · <u>EMS Number:</u> · <u>Stowage Category</u>	Warning: Flammable liquids. 30 F-E,S-D A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· <u>Transport/Additional information:</u>	
· <u>ADR</u> · <u>Limited quantities (LQ)</u> · <u>Excepted quantities (EQ)</u>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>Transport category</u> · <u>Tunnel restriction code</u>	3 D/E
· <u>IMDG</u> · <u>Limited quantities (LQ)</u> · <u>Excepted quantities (EQ)</u>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>UN "Model Regulation":</u>	UN 3295 HYDROCARBONS, LIQUID, N.O.S. MIXTURE, 3, III, ENVIRONMENTALLY HAZARDOUS

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 E2 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40
- National regulations:
- Information about limitation of use: Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning juveniles must be observed.
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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- VOC EU 696.7 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 H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
- Recommended restriction of use refer to Technical Data Sheet (TDS)
- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann
Elke Hake
Fon ++49 (0)911 64296-59
@mail E.Hake@akemi.de
- 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 Organisation
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4
- * Data compared to the previous version altered. Adaptation in accordance with REACH directive 1907/2006/EC

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