

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**Trade name: **Spectrum Paste**

Article number: 115xx, 11529-11578

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

Stainer

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.

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SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

Void

Signal word

Void

Hazard-determining components of labelling:

Not applicable.

Hazard statements

H412 Harmful 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 carefully and follow all instructions.

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

Determination of endocrine-disrupting properties

For information on endocrine disrupting properties see section 11.

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SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 141-02-6

EINECS: 205-448-2

Reg.nr.: 01-2119486983-19

bis(2-ethylhexyl)fumarate

Aquatic Chronic 2, H411

<10%

(Contd. on page 2)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 1)

CAS: 141-78-6
 EINECS: 205-500-4
 Index number: 607-022-00-5
 Reg.nr.: 01-2119475103-46

ethyl acetate

Flam. Liq. 2, H225
 Eye Irrit. 2, H319; STOT SE 3, H336
 EUH066

<1%

· 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.
 No special measures required.
- 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.
- After swallowing: Rinse out mouth and then drink plenty of water.

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

Headache
 Dizziness
 Nausea

· **4.3 Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.

SECTION 5: Firefighting measures· **5.1 Extinguishing media**

- Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **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.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation
 Use respiratory protective device against the effects of fumes/dust/aerosol.

· **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).

· **6.4 Reference to other sections**

No dangerous substances are released.
 See Section 7 for information on safe handling.

(Contd. on page 3)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 2)

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.
Use only in well ventilated areas.
No special measures required.

Information about fire - and explosion protection:

No special measures required.

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:

Protect from frost.

Storage class:

10

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****141-78-6 ethyl acetate**

IOELV Short-term value: 1468 mg/m³, 400 ppm
Long-term value: 734 mg/m³, 200 ppm

DNELs**141-02-6 bis(2-ethylhexyl)fumarate**

Dermal	DNEL (Langzeit-wiederholt)	42 mg/kg bw/day (ARB)
Inhalative	DNEL (Langzeit-wiederholt)	292 mg/m ³ Air (ARB)

141-78-6 ethyl acetate

Oral	DNEL (Langzeit-wiederholt)	4.5 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	63 mg/kg bw/day (ARB)
		37 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	1,468 mg/m ³ Air (ARB)
		734 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	734 mg/m ³ Air (ARB)
		367 mg/m ³ Air (BEV)

PNECs**141-02-6 bis(2-ethylhexyl)fumarate**

PNEC (wässrig)	1.1 mg/l (KA)
	0.003 mg/l (SW)
	1 mg/l (WAS)
PNEC (fest)	3.2 mg/kg Trockengew (SWS)

(Contd. on page 4)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 3)

141-78-6 ethyl acetate

PNEC (wässrig)	650 mg/l (KA)
	0.024 mg/l (MW)
	0.24 mg/l (SW)
	1.65 mg/l (WAS)
PNEC (fest)	0.148 mg/kg Trockengew (BO)
	0.115 mg/kg Trockengew (MWS)
	1.15 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· Appropriate engineering controls No further data; see section 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.
Short term filter device:

· Respiratory protection:

Filter A/P2
Not required.

· Hand protection

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

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

ARRETIL (<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:

Kresto Classic (<http://debstoko.com>)

SOLOPOL (<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

Butyl rubber, BR

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

(Contd. on page 5)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 4)

- Penetration time of glove material material can not be calculated in advance and has therefore to be checked prior to the application.
Value for the permeation: Level ≤ 3 , 120 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: Butoject (KCL, Art_No. 897, 898)
Butyl rubber, BR
- As protection from splashes gloves made of the following materials are suitable: Butoject (KCL, Art_No. 897, 898)
Nitrile rubber, NBR
Camatril (KCL, 730, 731, 732, 733)
Chloroprene rubber, CR
Camapren (KCL, Art_No. 720, 722, 726)
Butoject (KCL, Art_No. 897, 898)
Butyl rubber, BR
- Not suitable are gloves made of the following materials: Leather gloves
Strong material gloves
Nitrile rubber, NBR
- Eye/face protection Goggles recommended during refilling
- Body protection: Protective work clothing

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

- General Information
- Colour: Various colours
- Odour: Specific type
- Odour threshold: Not determined.
- Melting point/freezing point: Undetermined.
- Boiling point or initial boiling point and boiling range 184 °C
- Flammability Not applicable.
- Lower and upper explosion limit
- Lower: Not determined.
- Upper: Not determined.
- Flash point: 76 °C
- Auto-ignition temperature: 250 °C
- Decomposition temperature: Not determined.
- pH Not determined.
Not applicable
- Viscosity:
- Kinematic viscosity at 20 °C 0 s (DIN 53211/4)
- Dynamic: Not determined.
- Solubility
- water: Not miscible or difficult to mix.
- Partition coefficient n-octanol/water (log value) Not determined.
- Vapour pressure: Not determined.
- Density and/or relative density
- Density at 20 °C: 1.4-1.7 g/cm³
- Relative density Not determined.
- Vapour density Not determined.

(Contd. on page 6)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 5)

9.2 Other information

- Appearance:
- Form: Pasty
- Important information on protection of health and environment, and on safety.
- Ignition temperature: Product is not selfigniting.
- Explosive properties: Product does not present an explosion hazard.
- Solvent content:
- Organic solvents: 0.9 %
- Solids content: 49.8 %
- Change in condition
- Evaporation rate Not determined.

· Information with regard to physical hazard classes

- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Void
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

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.
- **10.3 Possibility of hazardous reactions**
 - Exothermic polymerisation.
 - Reacts with acids.
 - Reacts with strong alkali.
 - Reacts with strong oxidising agents.
- **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 hazard classes as defined in Regulation (EC) No 1272/2008**
- Acute toxicity Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 6)

· LD/LC50 values relevant for classification:

141-02-6 bis(2-ethylhexyl)fumarate

Oral	LD50	29,200 mg/kg (rat)
	NOAEL-Werte	≥1,000 mg/kg (rat)
Dermal	LD50	18,840 mg/kg (rabbit)

141-78-6 ethyl acetate

Oral	LD50	4,100 mg/kg (mouse)
		5,620 mg/kg (rat)
		4,934 mg/kg (rabbit) (OECD 401)
Dermal	NOAEL-Werte	900 mg/kg (rat)
	LD50	>18,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50	58 mg/l (rat)
	LC50/4 h	56 mg/l (rat)
	LC50/1h	200 mg/l (rat)
	LC50/8h	5.86 mg/l (rat)
	LC50/48h	333 mg/l (Leuciscus idus)

· Primary irritant effect:

· Skin corrosion/irritation

· Serious eye damage/irritation

· Respiratory or skin sensitisation

· Germ cell mutagenicity

· Carcinogenicity

· Reproductive toxicity

· STOT-single exposure

· STOT-repeated exposure

· Aspiration hazard

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

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11.2 Information on other hazards

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information**12.1 Toxicity**

· Aquatic toxicity:

141-02-6 bis(2-ethylhexyl)fumarate

NOEC	0.76 mg/kg (daphnia magna)
	0.3 mg/kg (piscis)

141-78-6 ethyl acetate

EC50/24h	2,300-3,090 mg/l (daphnia magna)
EC50/96h	220 mg/l (Pimephales promelas)
EC10/18h	2,900 mg/l (pseudomonas putida)
EC50/48h	610 mg/l (daphnia magna) (DIN 38412)
	5,600 mg/l (Scenedesmus subspicatus)
IC50/48h	3,300 mg/l (Scenedesmus subspicatus)
LC 0	29.3 mg/l (rat)
NOELR/72h	>100 mg/l (Desmodesmus subspicatus) (OECD 201)
NOEC/21d	2.4 mg/l (daphnia magna) (DIN 38412 Part 11)

(Contd. on page 8)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 7)

EC10	2,900 mg/l (pseudomonas putida)
EC50/48h	3,300 mg/l (Scenedesmus subspicatus)
EC50/72h	1,800-3,200 mg/l (selenastrum capricornutum)
LC50/96h	300-600 mg/l (Oncorhynchus mykiss)
	230 mg/l (Pimephales promelas)

· **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.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:**

Not applicable.

· **vPvB:**

Not applicable.

· **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**

· **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

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must be specially treated adhering to official regulations.
Smaller quantities can be disposed of with household waste.

· **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 27*	paint, inks, adhesives and resins containing hazardous substances

· **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 or ID number**

· **ADR, ADN, IMDG, IATA**

Void

· **14.2 UN proper shipping name**

· **ADR, ADN, IMDG, IATA**

Void

· **14.3 Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· **Class**

Void

· **14.4 Packing group**

· **ADR, IMDG, IATA**

Void

(Contd. on page 9)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 8)

· 14.5 Environmental hazards:· Marine pollutant: No**· 14.6 Special precautions for user**

Not applicable.

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

· Transport/Additional information:

Not dangerous according to the above specifications.

· UN "Model Regulation":

Void

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.

· REGULATION (EC) No 1907/2006 ANNEX XVII

Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:· Information about limitation of use: Employment restrictions concerning juveniles must be observed.· Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU 12.4-15.1 g/l· **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

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· Date of previous version: 17.05.2023

(Contd. on page 10)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 08.05.2025

Version number 5 (replaces version 4)

Revision: 08.05.2025

Trade name: Spectrum Paste

(Contd. of page 9)

· Version number of previousversion:

4

· 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 relatif au transport international 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)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 ATE: Acute toxicity estimate values
 Flam. Liq. 2: Flammable liquids – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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