

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.02.2021

Version number 43

Revision: 26.02.2021

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

1.1 Product identifier

- Trade name: **Multi-Purpose Filler No. 2**
- Article number: 20302, 20303, 20304, 20317, 20318, 20319, 20388, 20330, 20380
- UFI: T3C0-F0T8-U005-5PNF

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

Knife filler/ Surfacers
Polyester resin

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

- | | | |
|-------------------|-------|--|
| Flam. Liq. 3 | H226 | Flammable liquid and vapour. |
| Skin Irrit. 2 | H315 | Causes skin irritation. |
| Eye Irrit. 2 | H319 | Causes serious eye irritation. |
| Skin Sens. 1 | H317 | May cause an allergic skin reaction. |
| Repr. 2 | H361d | Suspected of damaging the unborn child. |
| STOT RE 2 | H373 | May cause damage to the hearing organs through prolonged or repeated exposure. |
| Aquatic Chronic 3 | H412 | Harmful to aquatic life with long lasting effects. |

- Response:
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- Storage: Store in a well-ventilated place. Keep cool.

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 GHS07 GHS08

Signal word

Warning

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· Hazard-determining components of labelling:

styrene
titanium dioxide
maleic anhydride

· Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child.
H373 May cause damage to the hearing organs through prolonged or repeated exposure.

· Precautionary statements

H412 Harmful to aquatic life with long lasting effects.
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.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

During processing and product hardening the network generator is released as fume. Consequently, take care for adequate air conditioning and for fume exhaustion on request.

· 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: 100-42-5 EINECS: 202-851-5 Index number: 601-026-00-0 Reg.nr.: 01-2119457861-32	styrene Flam. Liq. 3, H226 Repr. 2, H361d; STOT RE 1, H372; Asp. Tox. 1, H304 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 Aquatic Chronic 3, H412	<10%
CAS: 25013-15-4 EINECS: 246-562-2 Reg.nr.: 01-2119622074-50-0000	vinyltoluene Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	1-5%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119489379-17-xxxx	titanium dioxide Carc. 2, H351	1-5%

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CAS: 7779-90-0 EINECS: 231-944-3 Index number: 030-011-00-6 Reg.nr.: 01-2119485044-40-0000	trizinc bis(orthophosphate) Aquatic Acute 1, H400; Aquatic Chronic 1, H410	1-5%
CAS: 108-31-6 EINECS: 203-571-6 Index number: 607-096-00-9 Reg.nr.: 01-2119472428-31	maleic anhydride Resp. Sens. 1, H334; STOT RE 1, H372 Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Sens. 1A, H317	<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.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- 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.
- 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.
With reference to section 2 the formulation contains styrene in the indicated mass concentration range. Styrene fumes will preferably be incorporated by inhalation via respiratory tract, skin resorption is currently considered as an inferior way of incorporation. In case of inhalation styrene is absorbed in a 60-90% range. Distribution in organism occurs rapidly, the maximum blood concentration can be analyzed after one hour after incorporation. Styrene exposition affects skin, mucous membranes, and central nervous system (CNS).
Acute damages / risks to health:
In case of styrene poisoning mainly damages to and interactions with central nervous system (CNS) arise. In concentration ranges above 200 ml/m3 symptoms such as fatigue, nausea, imbalance and prolonged response times are observed.
Chronical health risks:
Effects at central and peripheral nervous system and respiratory tract are evident in literature.
Main health risks are:
- prolonged response times
- reduced cognitive performance, partial amnesia
- retardation of nervous impulse transition speed
- disturbances of pulmonary function

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

Breathing difficulty
Headache
Dizziness
Dizziness

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- Hazards
 - Coughing
 - Profuse sweating
 - Nausea
 - Danger of impaired breathing.
 - Skin contact with polyester and epoxy resin solutions as ingredient of the product should be avoided due to risks of skin irritations or allergic skin appearances. If occasional hand contact can not be avoided, protection gloves, proper protection ointments and protective agents generating a protective layer on the skin were applied.
- **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.
- For safety reasons unsuitable extinguishing agents:
 - Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
 - In case of fire, the following can be released:
 - Carbon monoxide (CO)
 - Under certain fire conditions, traces of other toxic gases cannot be excluded.
 - During heating or in case of fire poisonous gases are produced.
- **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.
 - Mount 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.

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.
 - Mount respiratory protective device.
 - Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
 - Do not allow product to reach sewage system or any water course.
 - Prevent seepage into sewage system, workpits and cellars.
 - 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.
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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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.
 Open and handle receptacle with care.
 Prevent formation of aerosols.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
 Keep respiratory protective device available.

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.
 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**8.1 Control parameters****Additional information about design of technical facilities:**

No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:**100-42-5 styrene**

WEL Short-term value: 1080 mg/m³, 250 ppm
 Long-term value: 430 mg/m³, 100 ppm

108-31-6 maleic anhydride

WEL Short-term value: 3 mg/m³
 Long-term value: 1 mg/m³
 Sen

DNELs**100-42-5 styrene**

Oral	DNEL (Langzeit-wiederholt)	2.1 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	406 mg/kg bw/day (ARB)
		343 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	289-306 mg/m ³ Air (ARB)
		174.25-182.75 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	85 mg/m ³ Air (ARB)

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		10.2 mg/m ³ Air (BEV)
25013-15-4 vinyltoluene		
Oral	DNEL (Langzeit-wiederholt)	0.0833 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	5.83 mg/m ³ Air (ARB) 1.04 mg/m ³ Air (BEV)
13463-67-7 titanium dioxide		
Oral	DNEL (Langzeit-wiederholt)	700 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	10 mg/m ³ Air (ARB)
7779-90-0 trizinc bis(orthophosphate)		
Oral	DNEL (Langzeit-wiederholt)	0.83 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	83 mg/kg bw/day (ARB) 83 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	5 mg/m ³ Air (ARB) 2.5 mg/m ³ Air (BEV)
108-31-6 maleic anhydride		
Oral	DNEL (Langzeit-wiederholt)	0.06 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	0.04 mg/kg bw/day (ARB)
	DNEL (Langzeit-wiederholt)	0.2 mg/kg bw/day (ARB) 0.1 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	0.95 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	0.19-0.4 mg/m ³ Air (ARB) 0.08 mg/m ³ Air (BEV)

· PNECs

100-42-5 styrene	
PNEC (wässrig)	5 mg/l (KA) 0.014 mg/l (MW) 0.028 mg/l (SW) 0.04 mg/l (WAS)
PNEC (fest)	0.2 mg/kg Trockengew (BO) 0.307 mg/kg Trockengew (MWS) 0.614 mg/kg Trockengew (SWS)
25013-15-4 vinyltoluene	
PNEC (wässrig)	17 mg/l (KA) 0.002 mg/l (MW) 0.0498 mg/l (SW)
PNEC (fest)	0.0471 mg/kg Trockengew (BO) 0.025 mg/kg Trockengew (MWS) 1.245 mg/kg Trockengew (SWS)
13463-67-7 titanium dioxide	
PNEC (wässrig)	100 mg/l (KA) 1 mg/l (MW) 0.127 mg/l (SW)
PNEC (fest)	100 mg/kg Trockengew (BO) 100 mg/kg Trockengew (MWS) 1,000 mg/kg Trockengew (SWS)

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108-31-6 maleic anhydride

PNEC (wässrig)	44.6 mg/l (KA)
	0.00446 mg/l (MW)
	0.0446 mg/l (SW)
	0.4281 mg/l (WAS)
PNEC (fest)	0.0415 mg/kg Trockengew (BO)
	0.0334 mg/kg Trockengew (MWS)
	0.334 mg/kg Trockengew (SWS)

· Additional information:

The lists valid during the making were used as basis.

· **8.2 Exposure controls**· 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.
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes and skin.

· Respiratory protection:

Short term filter device:
 Filter A/P2

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.
 After use of gloves apply skin-cleaning agents and skin cosmetics.

· Protection of hands:**Protective gloves**

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

Skin protection agent recommendation for preventive skin shelter without use of protective gloves:

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

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

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

Skin protection agent recommendation for skin aftercare:

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

Skin protection recommendation for skin cleaning after product handling:

STOKO VITAN (<http://www.stoko.com>)· Material of gloves

Fluorocarbon rubber (Viton)

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 materialValue 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)

· As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

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

Butoject (KCL, Art_No. 897, 898)

Butyl rubber, BR

· Not suitable are gloves made of the following materials:

Chloroprene rubber, CR

Leather gloves

Strong material gloves

· 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:

Pasty

Colour:

According to product specification

· Odour:

Characteristic

· Odour threshold:

Not determined.

· pH-value:

Not applicable

· Change in condition

Melting point/freezing point:

Undetermined.

Initial boiling point and boiling range: 145.2 °C

· Flash point:

31 °C

· Flammability (solid, gas):

Not applicable.

· Ignition temperature:

480 °C

· Decomposition temperature:

Not determined.

· Auto-ignition temperature:

Product is not selfigniting.

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· <u>Explosive properties:</u>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <u>Explosion limits:</u>	
Lower:	1.2 Vol %
Upper:	8.9 Vol %
· <u>Vapour pressure at 20 °C:</u>	6 hPa
· <u>Density at 20 °C:</u>	1.92 g/cm ³
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.
· <u>Evaporation rate</u>	Not determined.
· <u>Solubility in / Miscibility with water:</u>	Not miscible or difficult to mix.
· <u>Partition coefficient: n-octanol/water:</u>	Not determined.
· <u>Viscosity:</u>	
Dynamic:	Not determined.
Kinematic:	Not applicable
· <u>Solvent content:</u>	
Organic solvents:	13.6 %
Solids content:	64.5 %
· 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.
- **10.3 Possibility of hazardous reactions**
 - Exothermic polymerisation.
 - Reacts with strong alkali.
 - Reacts with strong acids.
 - 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
 - Phosphorus compounds

* 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:

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4 h	>72.5 mg/l
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100-42-5 styrene

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat) (OECD-Prüfrichtlinie 402)

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Inhalative	LC50/4h	9.5 mg/m ³ (mouse) 11,800 mg/m ³ (rat)
	LC50/4 h	11.8 mg/l (rat)
	NOAEC	4.34 mg/l (rat)
25013-15-4 vinyltoluene		
Oral	LD50	3,375 mg/kg (rat)
	NOAEL	600 mg/kg (rat)
Dermal	LD50	4,585 mg/kg (rabbit)
Inhalative	LC50/4h	>16,891 mg/m ³ (rat)
	LC50/4 h	11 mg/l (ATE)
13463-67-7 titanium dioxide		
Oral	LD50	>5,010 mg/kg (rat)
	NOAEL	24,000 mg/kg (rat)
Dermal	LD50	>10,010 mg/kg (rbt)
Inhalative	NOAEL	10 mg/m ³ (rat)
	LC50/48h	>100 mg/l (daphnia magna)
7779-90-0 trizinc bis(orthophosphate)		
Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.7 mg/l (rat)
108-31-6 maleic anhydride		
Oral	LD50	1,090-2,620 mg/kg (rabbit) 400-480 mg/kg (rat)
Dermal	LD50	2,620 mg/kg (rabbit)
Inhalative	LC50/1h	>4.35 mg/l (rat)
	LC50/48h	138 mg/l (lem)

- Primary irritant effect:

- Skin corrosion/irritation

Causes skin irritation.

- Serious eye damage/irritation

Causes serious eye irritation.

- Respiratory or skin sensitisation

May cause an allergic skin reaction.

- Experience with humans:

After incorporation and inhalation styrene predominantly will be metabolized in the organism to mandelic and phenylglyoxylic acid and metabolites will pass through urine excretion.

- Additional toxicological information:

- Toxicokinetics, metabolism and distribution

After incorporation and inhalation styrene predominantly will be metabolized in the organism to mandelic and phenylglyoxylic acid and metabolites will pass through urine excretion.

- Acute effects (acute toxicity, irritation and corrosivity)

Styrene:

Artificial special nutrition in rat population, acute LD50 value, oral: 5000 mg/kg.
Inhalation, rat population, acute LC50 value (4h): 24 mg/l.

- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Styrene

Tests for chromosome divergence:

Mouse micro-nucleus test: mutagen

Styrene:

Tests for DNA effects:

- exchange of chromatides: mutagen

- DNA chain fragmentation: mutagen

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

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

Suspected of damaging the unborn child.

- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity

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· STOT-single exposure	Based on available data, the classification criteria are not met.
· STOT-repeated exposure	May cause damage to the hearing organs through prolonged or repeated exposure.
· Aspiration hazard	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information**12.1 Toxicity**

· Aquatic toxicity:

100-42-5 styrene

EC50/96h	6.3 mg/l (Pseudokirchneriella subcapitata)
EC50	500 mg/l (BES) (ISO Vorschrift 8192-1986 E)
	5.5 mg/l (Photobac. phosphoreum)
IC50/72h	4.9 mg/l (green alge)
	1.4 mg/l (selenastrum capricornutum)
IC5/8d	>200 mg/l (Scenedesmus quadricauda)
EC10/16h	72 mg/l (pseudomonas putida)
EC50/16h	>72 mg/l (pseudomonas putida)
EC50/8d	>200 mg/l (Scenedesmus quadricauda)
EC50/72u	>1-<10 mg/l (green alge)
EC20/0.5h	140 mg/l (BES) (OECD 209)
NOEC/21d	1.01 mg/l (daphnia magna)
EC10	0.28 mg/l (Pseudokirchneriella subcapitata) (EPA OTS 797.1050)
EC50/48h	0.56 mg/l (green alge)
	3.3-7.4 mg/l (daphnia magna)
EC50/72h	0.46-4.3 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	>1-<10 mg/l (piscis)
	19.03-33.53 mg/l (lem)
	3.24-4.99 mg/l (pimephales promelas)
	6.75-14.5 mg/l (Pimephales promelas)
	58.75-95.32 mg/l (poecilia reticulata)
LC50/72h	4.9 mg/l (green alge)

25013-15-4 vinyltoluene

EC50	2.6 mg/l (Bluegill.)
EC50/48h	1.3 mg/l (daphnia magna)
ErC50/72h	4.3 mg/l (Pseudokirchneriella subcapitata)
NOEC	0.563 mg/l (piscis)
NOELR/72h	1.6 mg/l (green alge)
NOEC/21d	0.32 mg/l (daphnia magna)
	0.563 mg/l (piscis)
EC10	0.25 mg/l (Desmodesmus subspicatus)
EC50/72h	0.319 mg/l (Desmodesmus subspicatus)
	5.2 mg/l (Fathead minnow)
	2.6 mg/l (selenastrum capricornutum)
LC50/96h	5.2-23.4 mg/l (piscis)
	5.2 mg/l (pimephales promelas)

13463-67-7 titanium dioxide

EC50	>1,000 mg/l (bacteria)
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EC50/48h	>100 mg/l (daphnia magna)
EC50/72h	16 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	>100 mg/l (Oncorhynchus mykiss)
	>1,000 mg/l (pimephales promelas)
7779-90-0 trizinc bis(orthophosphate)	
EC50/48h	28.2 mg/l (daphnia magna)
ErC50/72h	<0.3 mg/l (Desmodesmus subspicatus)
EC50/48h	<1.7 mg/l (daphnia magna)
EC50/72h	0.28 mg/l (Selenastrum capricornutum)
LC50/96h	<5.1 mg/l (Oncorhynchus mykiss)
108-31-6 maleic anhydride	
EC50/24h	316-330 mg/l (daphnia magna)
EC50	77 mg/l (daphnia magna)
EC10/18h	44.6 mg/l (pseudomonas putida)
EC50/48h	42.81 mg/l (daphnia magna)
ErC50/72h	74.35 mg/l (Pseudokirchneriella subcapitata) (OECD 202)
NOELR/72h	150 mg/l (Pseudokirchneriella subcapitata)
NOEC/21d	10 mg/l (daphnia magna)
EC50/72h	29 mg/l (Desmodesmus subspicatus)
	74.32 mg/l (Pseudokirchneriella subcapitata)
	>150 mg/l (Selenastrum capricornutum)
LC50/96h	75 mg/l (Iepomis macrochirus)
	75 mg/l (Oncorhynchus mykiss)

· **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:

Harmful to fish

· Additional ecological information:

· General notes:

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

Harmful to 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
acetone

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* **SECTION 14: Transport information**

· **14.1 UN-Number**
· ADR, IMDG, IATA

UN3269

· **14.2 UN proper shipping name**
· ADR
· IMDG, IATA

3269 POLYESTER RESIN KIT
POLYESTER RESIN KIT

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

· Class
· Label

3 (F3) Flammable liquids.
3

· IMDG, IATA

· Class
· Label

3 Flammable liquids.
3

· **14.4 Packing group**· ADR, IMDG, IATA

III

· **14.5 Environmental hazards:**· Marine pollutant:

No

· **14.6 Special precautions for user**· Hazard identification number (Kemler code):

Warning: Flammable liquids.

· EMS Number:

- F-E, S-D

· Stowage Category

A

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· Transport/Additional information:· ADR· Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

· Remarks:

Without hardener component: no dangerous goods < 450 l

· IMDG· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: See SP340

· Remarks:

Without hardener component: no dangerous goods < 30 l

· IATA· Remarks:

Without hardener component: 3/III UN 1866 Resin Solution

· UN "Model Regulation":

UN 3269 POLYESTER RESIN KIT, 3, III

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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

P5c FLAMMABLE LIQUIDS

- Qualifying quantity (tonnes) for the application of lower-tier requirements

5,000 t

- Qualifying quantity (tonnes) for the application of upper-tier requirements

50,000 t

- 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

260.6 g/l

- **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.
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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.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
- Recommended restriction of use

refer to Technical Data Sheet (TDS)

- Department issuing SDS:

Laboratory

- Contact:

Elke Hake
Fon ++49 (0)911 64296-59
@mail E.Hake@akemi.de
- Abbreviations and acronyms:

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)

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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
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Skin Sens. 1A: Skin sensitisation – Category 1A
 Carc. 2: Carcinogenicity – Category 2
 Repr. 2: Reproductive toxicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 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
 REACH directive 1907/2006/EC

· Sources

 · * Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC

GB