Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2011 Revision: 18.02.2011

* **1 Identification of the substance/mixture and of the company/undertaking**

· **Product identifier**
· Trade name: **Poly-Soft**

· Article number: 10441/10442, 10443/10444, 10445, 10450/10451, 10452/10453, 10465/10466, 10467/10468, 10488/10490, 10492/10493, 10494/10495, 10496/10540, 10150/10151, 10152/10153, 10159
· Relevant identified uses of the substance or mixture and uses advised against
· Application of the substance / the preparation: Knife filler/ Surfacer

· **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
Dieter Zimmermann
@mail_D.Zimmermann@akemi.de
· 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 Hazards identification**

· **Classification of the substance or mixture**
· Classification according to Regulation (EC) No 1272/2008


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

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


Xn; Harmful

R20: Harmful by inhalation.


Xi; Irritant

R36/38: Irritating to eyes and skin.

R10: Flammable.
· 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.
· Classification system: The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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· **Label elements**

· Hazard-determining components of labelling: Void

· Labelling according to EU guidelines: The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· Code letter and hazard designation of product:

Xn Harmful

· Hazard-determining components of labelling: styrene

· Risk phrases:
10 Flammable.
20 Harmful by inhalation.
36/38 Irritating to eyes and skin.

· Safety phrases:
2 Keep out of the reach of children.
9 Keep container in a well-ventilated place.
13 Keep away from food, drink and animal feedingstuffs.
23 Do not breathe gas/fumes/vapour/spray.
25 Avoid contact with eyes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
46 If swallowed, seek medical advice immediately and show this container or label.

· Special labelling of certain preparations: Contains phthalic anhydride. May produce an allergic reaction.

· **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.

*

3 Composition/information on ingredients

· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 100-42-5 EINECS: 202-851-5 Index number: 601-026-00-0	styrene Xn R20; Xi R36/38 R10 Flam. Liq. 3, H226; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	12.5-25%
CAS: 85-44-9 EINECS: 201-607-5 Index number: 607-009-00-4	phthalic anhydride Xn R22; Xn R42/43; Xi R37/38-41 Resp. Sens. 1, H334; Eye Dam. 1, H318; Acute Tox. 4, H302; STOT SE 3, H335; Skin Irrit. 2, H315; Skin Sens. 1, H317	<1%

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CAS: 38668-48-3 EINECS: 254-075-1	1,1'-(p-tolylimino)dipropan-2-ol T R25 R52/53 Acute Tox. 2, H300; Aquatic Chronic 3, H412	<1%
CAS: 141-78-6 EINECS: 205-500-4 Index number: 607-022-00-5	ethyl acetate Xi R36; F R11 R66-67 Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	<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 in side position.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
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.

· 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: 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

· Most important symptoms and effects, both acute and delayed: Nausea
Dizziness
Headache

· Hazards: Danger of impaired breathing.

· Indication of any immediate medical attention and special treatment needed: If swallowed, gastric irrigation with added, activated carbon.

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5 Firefighting measures

· **Extinguishing media**
· Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
· For safety reasons unsuitable extinguishing agents: Water
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)
Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **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.

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.
Do not flush with water or aqueous cleansing agents

· **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 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: Highly volatile, flammable constituents are released during processing.

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Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **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: Keep container tightly sealed.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· 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
141-78-6 ethyl acetate	
WEL	Short-term value: 400 ppm Long-term value: 200 ppm

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

· **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.
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.
· 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:
ARRETIL (http://www.stoko.com)
Akemi skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:
STOKO EMULSION (http://www.stoko.com)
Akemi skin protection recommendation for skin cleaning after product handling:
SOLOPOL (http://www.stoko.com)
SLIG SPEZIAL (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

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were generated and verified with material samples of the recommended protection glove type in the scope of laboratory anylyses 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: 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 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 ≥ 1.30 min
The exact break trough 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: Butyl rubber, BR
Butoject (KCL, Art No. 897, 898)

· As protection from splashes gloves made of the following materials are suitable: Butyl rubber, BR
Butoject (KCL, Art No. 897, 898)

· Not suitable are gloves made of the following materials: Leather gloves
Strong material gloves

· Eye protection:

Tightly sealed goggles

· Body protection: Protective work clothing

*

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· General Information	
· Appearance:	
Form:	Pasty
Colour:	Different according to colouring
· Odour:	Characteristic
· pH-value:	Not applicable
· Change in condition	
Melting point/Melting range:	Undetermined.

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Boiling point/Boiling range:	145°C
· Flash point:	32°C
· Ignition temperature:	480°C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.2 Vol %
Upper:	8.9 Vol %
· Vapour pressure at 20°C:	6 hPa
· Density at 20°C:	1.78 g/cm³
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	16.3 %
Solids content:	82.1 %

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** Exothermic polymerization.
Reacts with peroxides and other radical forming substances.
Reacts with strong acids.
Reacts with strong alkali.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· Acute toxicity:

· LD/LC50 values relevant for classification:

100-42-5 styrene

Oral	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	11.8 mg/l (rat)
	LC50/4h	9.5 mg/m3 (mouse)

· Primary irritant effect:
· on the skin: Irritant to skin and mucous membranes.
· on the eye: Irritating effect.
· Sensitization: No sensitizing effects known.

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· Experience with humans: After incorporation and inhalation styrene predominantly will be metabolized in the organism to mandelic and phenylglyoxylic acid and matabolites will pass through urine excretion.

· Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

· 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.

· CMR effects (carcinogenity, 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

12 Ecological information

· **Toxicity**

· Acquatic toxicity:

100-42-5 styrene	
EC10/16h	72 mg/l (pseudomonas putida)
EC50	500 mg/l (BES) (ISO Vorschrift 8192-1986 E)
	5.5 mg/l (Photobac. phosphoreum)
EC50/16h	> 72.0 mg mg/l (pseudomonas putida)
EC50/48h	0.56 mg/l (green alge)
	4.7 mg/l (daphnia magna)
EC50/72u	>1-<10 mg/l (green alge)
EC50/8d	> 200 mg/l (Scenedesmus quadricauda)
IC5/8d	> 200 mg/l (Scenedesmus quadricauda)
IC50/72h	4.9 mg/l (green alge)
	1.4 mg mg/l (selenastrum capricornutum)
LC50/96h	>1-<10 mg/l (piscis)
	25.0 mg/l (lem)
	32 mg/l (pimephales promelas)
	4.02 mg/l (Pimephales promelas)

· **Additional ecological information:**

· General notes: Do not allow product to reach ground water, water course or sewage system.
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

· **Results of PBT and vPvB assessment**

· PBT: Not applicable.

· vPvB: Not applicable.

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13 Disposal considerations

· **Waste treatment methods**
· Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· 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 dangerous substances

· **Uncleaned packaging:**
· Recommendation: Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
· Recommended cleansing agents: Alcohol
acetone

14 Transport information

· **Land transport ADR/RID (cross-border)**

· ADR/RID class:	3 (F1) Flammable liquids.
· Danger code (Kemler):	-
· UN-Number:	3269
· Packaging group:	III
· Hazard label	3
· UN proper shipping name:	3269 POLYESTER RESIN KIT
· Limited quantities (LQ)	LQ7
· Transport category	3
· Tunnel restriction code	E
· Remarks:	Without hardener component: no dangerous goods < 450 l

· **Maritime transport IMDG:**

· IMDG Class:	3
· UN Number:	3269
· Label	3
· Packaging group:	III
· EMS Number:	F-E,S-D
· Marine pollutant:	No
· Proper shipping name:	POLYESTER RESIN KIT
· Remarks:	Without hardener component: no dangerous goods < 30 l

· **Air transport ICAO-TI and IATA-DGR:**

· ICAO/IATA Class:	3

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· UN/ID Number:	3269
· Label	3
· Packaging group:	III
· Proper shipping name:	POLYESTER RESIN KIT
· Remarks:	Without hardener component: 3/III UN 1866 Resin Solution

· **UN "Model Regulation":** UN3269, POLYESTER RESIN KIT, 3, III

· **Special precautions for user** Warning: Flammable liquids.

15 Regulatory information

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

· National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
· VOC EU 289.8 g/l
· **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.

· Relevant phrases

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H300 Fatal if swallowed.
H302 Harmful if swallowed.
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.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

R10 Flammable.
R11 Highly flammable.
R20 Harmful by inhalation.
R22 Harmful if swallowed.
R25 Toxic if swallowed.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.
R42/43 May cause sensitisation by inhalation and skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

· Recommended restriction of use refer to Technical Data Sheet (TDS)

· **Department issuing MSDS:** Laboratory

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· **Contact:**

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· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

· * Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC