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

AKEMI®

Printing date 24.04.2019 Version number 10 Revision: 24.04.2019

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

· 1.1 Product identifier

• Trade name: Plastic Parts Adhesive Component A

• Article number: 70209, 70210

 1.2 Relevant identified uses of the substance or mixture and uses advised against

uses advised against
 Application of the substance / the

mixture Epoxy resin adhesive

· 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH

Laboratory

Lechstrasse 28 D 90451 Nürnberg Tel. +49(0)911-642960 Fax. +49(0)911-644456 e-mail info@akemi.de

• Further information obtainable from:

· 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



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

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.

· 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 eye irritation persists: Get medical advice/attention.

· 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.



GHS07 GHS09

Signal word Warning

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Trade name: Plastic Parts Adhesive Component A

 Hazard-determining components of labelling: bis[4-(2,3-epoxypropoxy)phenyl]propane

bisphenol F-(epichlorhydrin); epoxy resin

Hazard statements
 H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction. 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.
P261 Avoid breathing vapours.

P273 Avoid release to the environment.

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

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.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

	 Dangerous components: 		
Ī	CAS: 1675-54-3	bis[4-(2,3-epoxypropoxy)phenyl]propane	50-100%
	EINECS: 216-823-5	4 Aquatic Chronic 2, H411	
	Index number: 603-073-00-2	♦ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	
	Reg.nr.: 01-2119456619-26-xxxx	·	
ı	CAS: 9003-36-5	bisphenol F-(epichlorhydrin); epoxy resin	25-50%
	NLP: 500-006-8	Aquatic Chronic 2, H411	
	Reg.nr.: 01-2119454392-40	♦ Skin Irrit. 2, H315; Skin Sens. 1, H317	
	 Additional information: 	For the wording of the listed hazard phrases refer to section 16.	

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 and to be sure call for a doctor.

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: Rinse out mouth and then drink plenty of water.

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Trade name: Plastic Parts Adhesive Component A

• 4.2 Most important symptoms and effects, both acute and

delayed

Breathing difficulty

Coughing

Allergic reactions Profuse sweating

Information for doctor:

Bisphenol-A based resins: Inhalation, swallowing or dermal incorporation may cause health damage. Irritates respiratory tract, digestion system, eyes and skin: e.g., cough, dyspnea, lacrimation, burning. May cause health interferences such as dermal changes, renal, hepatic damage, and blood count changes. May provoke skin allergies. Sensitized users can react towards very low concentrations of Bisphenol-A-Epichlorhydrine and should avoid any further contact with this chemical.

The sensitizing effect of epoxide based resins is mainly caused by the concentration of epoxy resin polymers with a specific molecular weight $\leq 300.$ The observed allergic dermal and respiratory appearances should be treated symptomatically in dependence of the severity. An epoxy resin based allergic disease belongs to a cell mediated (interaction of lymphocytes) type IV allergy.

• <u>Hazards</u> 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 applied.

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:

Use fire extinguishing methods suitable to surrounding conditions.

· 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,

e.g.:

Hydrogen chloride (HCI)

· 5.3 Advice for firefighters

· Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device. Do not inhale explosion gases or combustion gases.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage

system.

Dispose of fire debris and contaminated fire fighting water in accordance with

official regulations.

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 to penetrate the ground/soil.

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

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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: Dispose of the material collected according to regulations.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal

binders, sawdust).

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.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe

handling Store in cool, dry place in tightly closed receptacles.

Keep receptacles tightly sealed. Use only in well ventilated areas.

Ensure good ventilation/exhaustion at the workplace.

· Information about fire - and

<u>explosion protection:</u> No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

Requirements to be met by

<u>storerooms and receptacles:</u> <u>Store only in the original receptacle.</u>

Prevent any seepage into the ground.

· Information about storage in one

common storage facility: Store away

Store away from reducing agents.

Store away from foodstuffs.

· Further information about storage

conditions:

Store receptacle in a well ventilated area.

Keep container tightly sealed.

• 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.

· DNELs

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Dermal DNEL (Langzeit-wiederholt) 8.33 mg/kg bw/day (ARB) Inhalative DNEL (Langzeit-wiederholt) 12.25 mg/m³ Air (ARB)

9003-36-5 bisphenol F-(epichlorhydrin); epoxy resin

Dermal DNEL (Langzeit-wiederholt) 104.15 mg/kg bw/day (ARB) Inhalative DNEL (Langzeit-wiederholt) 29.39 mg/m³ Air (ARB)

· PNECs

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

PNEC (wässrig) 0.0006 mg/l (MW)

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0.006 mg/l (SW)

9003-36-5 bisphenol F-(epichlorhydrin); epoxy resin

PNEC (wässrig) 0.0003 mg/l (MW) 0.003 mg/l (SW)

Additional information:

The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Protection of hands:

· 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.

Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

Not necessary if room is well-ventilated. · Respiratory protection:

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.

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 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

Chloroprene rubber, CR 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 ≤ 6, 480 min

The exact break trough time has to be found out by the manufacturer of the

protective gloves and has to be observed.

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· For the permanent contact gloves made of the following materials are

suitable:

Butyl rubber, BR

Butoject (KCL, Art_No. 897, 898)

Nitrile rubber, NBR

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

Dermatril (Art_No. 740, 741, 742)

Chloroprene rubber, CR

Camapren (KCL, Art_No. 720, 722, 726)

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

suitable:

Nitrile rubber, NBR

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

Chloroprene rubber, CR

Camapren (KCL, Art_No. 720, 722, 726)

· Not suitable are gloves made of

the following materials:

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	<u>ph</u>	ysical and	chemical	pro	perties
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· General Information

· Appearance:

Form: Pasty

Colour: Different according to colouring

· Odour: Characteristic

pH-value: Not applicable

· Change in condition

· Ignition temperature:

Melting point/freezing point: Undetermined. Initial boiling point and boiling range: > 200 °C

· Flash point: > 250 °C

370 °C

 Decomposition temperature: > 200 °C

 Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Vapour pressure at 20 °C: 2 hPa

· Density at 20 °C: 1.2 g/cm³ ([1,19 - 1.21 g/cm³])

· Solubility in / Miscibility with

Not miscible or difficult to mix. water:

Viscosity:

Not determined. Dynamic: Not applicable Not determined. Kinematic: Not applicable

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 Solvent content: 	
Organic solvents:	

0.0 % 5.9 %

Solids content: 5.9 %

• <u>9.2 Other information</u> 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

<u>reactions</u> May produce violent reactions with bases and numerous organic substances

including alcohols and amines. Reacts with strong acids. Exothermic polymerisation.

10.4 Conditions to avoid
 10.5 Incompatible materials:

No further relevant information available.
No further relevant information available.

· 10.6 Hazardous decomposition

products: Irritant gases/vapours

Carbon monoxide and carbon dioxide

Possible in traces.

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:

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Oral LD50 15,000 mg/kg (rat)
Dermal LD50 23,000 mg/kg (rabbit)

9003-36-5 bisphenol F-(epichlorhydrin); epoxy resin

Oral LD50 >2,000 mg/kg (rat)

Dermal LD50 >2,000 mg/kg (rabbit)
>2,000 mg/kg (rat)

· Primary irritant effect:

• <u>Skin corrosion/irritation</u> Causes skin irritation.

· <u>Serious eye damage/irritation</u> Causes serious eye irritation.

• Respiratory or skin sensitisation May cause an allergic skin reaction.

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

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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SECTION 12: Ecological information

· 12.1 Toxicity

- Aquatic toxicity:			
1675-54-3	1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane		
EC50/48h	1.8 mg/l (daphnia magna)		
EC50/72h	11 mg/l (selenastrum capricornutum)		
LC50/96h	2 mg/l (Oncorhynchus mykiss)		
9003-36-5	9003-36-5 bisphenol F-(epichlorhydrin); epoxy resin		
IC50	>100 mg/l (bacteria)		
EC50/48h	2.55 mg/l (daphnia magna) (OECD 202: Part I)		
NOEC	0.3 mg/kg (daphnia magna) (OECD 211)		
EC50/72h	1.8 mg/l (green alge) (OECD 201)		
	1.8 mg/l (Selenastrum capricornutum)		
LC50/96h	0.55 mg/l (piscis) (OECD 203)		

12.2 Persistence and

degradability No further relevant information available. · 12.3 Bioaccumulative potential No further relevant information available. No further relevant information available. · 12.4 Mobility in soil

· Ecotoxical effects:

Toxic for fish · Remark:

2.54 mg/l (Leuciscus idus)

0.55 mg/l (Oncorhynchus mykiss)

· 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

Must not be disposed together with household garbage. Do not allow product to Recommendation

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 hazardous substances				

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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Transport categoryTunnel restriction code



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SECTION 14: Transport information		
· 14.1 UN-Number · ADR, IMDG, IATA	UN3082	
· 14.2 UN proper shipping name · ADR	LIQUID, N.O.S. (bis[4-(2,3 bisphenol F-(epichlorhydrin); e	
· <u>IATA</u>	N.O.S. (bis[4-(2,3-epoxyprop (epichlorhydrin); epoxy resin), ENVIRONMENTALLY HAZA	ARDOUS SUBSTANCE, LIQUID
	N.O.S. (bis[4-(2,3-epoxyprop (epichlorhydrin); epoxy resin)	oxy)phenyl]propane, bisphenol F
· 14.3 Transport hazard class(es)		
· ADR		
· Class · Label	9 (M6) Miscellaneous dangero 9	us substances and articles.
· IMDG, IATA		
· <u>Class</u> · Label	9 Miscellaneous dangerous su 9	ubstances and articles.
· 14.4 Packing group · ADR, IMDG, IATA	III	
 14.5 Environmental hazards: Marine pollutant: 	Product contains environmenta No	ally hazardous substances:
Special marking (ADR):Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)	
 14.6 Special precautions for user Danger code (Kemler): EMS Number: Stowage Category 	Warning: Miscellaneous dange 90 F-A,S-F A	erous substances and articles.
14.7 Transport in bulk according to a Marpol and the IBC Code	Annex II of Not applicable.	
· Transport/Additional information:		
· ADR		
Limited quantities (LQ)Excepted quantities (EQ)	5L Code: E1	
· Transport category	Maximum net quantity per inne Maximum net quantity per oute	

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· IMDG

Limited quantities (LQ)

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE. LIQUID, N.O.S. (BIS[4-(2,3-EPOXYPROPOXY)PHENYL] PROPANE, BISPHENOL F-(EPICHLORHYDRIN); EPOXY

RESIN), 9, III

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

500 t

· Qualifying quantity (tonnes) for the

application of lower-tier

requirements 200 t

· Qualifying quantity (tonnes) for the

application of upper-tier

requirements

- REGULATION (EC) No 1907/2006

ANNEX XVII Conditions of restriction: 3

National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be

observed.

 $0.0 \, g/l$

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· VOC EU

· 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 H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

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

· Department issuing SDS: Laboratory

· Contact: Dieter Zimmermann

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de · Abbreviations and acronyms:

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

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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 vPvB: very Persistent and very Bioaccumulative Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2

· Sources REACH directive 1907/2006/EC

· * Data compared to the previous version altered. Adaptation in accordance with REACH directive 1907/2006/EC