according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

Protective Coating Series AR-PC 503 & AR-PC 504

Material number AR-PC 503 & AR-PC 504

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

1.1 Product identifier

Trade name: Protective Coating Series AR-PC 503 & AR-PC 504

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

General use: Intermediate for electronic industry

1.3 Details of the supplier of the safety data sheet

Company name: Allresist

Gesellschaft für chemische Produkte zur Mikrostrukturierung mbH

Street/POB-No.: Am Biotop 14
Postal Code, city: 15344 Strausberg

Germany

 www.
 www.allresist.de

 E-mail:
 info@allresist.de

 Telephone:
 +49 (0)33 41-35 93-0

 Telefax:
 +49 (0)33 41-35 93-29

Dept. responsible for information:

Frau Feldt, Email: doerte.feldt@allresist.de

1.4 Emergency telephone number

Telephone: +49 (0)33 41-35 93-0 Only available during office hours.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 3; H226 Flammable liquid and vapour.

Acute Tox. 4; H332 Harmful if inhaled. Skin Irrit. 2; H315 Causes skin irritation.

Skin Sens. 1; H317 May cause an allergic skin reaction.

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

2.2 Label elements

Labelling (CLP)



Signal word: Warning

Hazard statements: H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P261 Avoid breathing vapours/spray. P273 Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection. P280

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse

skin with water [or shower].

P312 Call a POISON CENTER/doctor if you feel unwell. P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P235 Store in a well-ventilated place. Keep cool.

Special labelling

Contains Chlorobenzene and Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin Text for labelling:

(number average molecular weight <=700)

2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided. Inhaling can lead to irritations of the respiratory tract and mucous membrane.

Higher doses may lead to a narcotic effect.

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Mixture of the substances listed below with non-hazardous additions:

Hazardous ingredients:

Ingredient	Designation	Content	Classification
REACH 01-2119432722-45-xxxx EC No. 203-628-5 CAS 108-90-7	Chlorobenzene	80 - 95 %	Flam. Liq. 3; H226. Acute Tox. 4; H332. Skin Irrit. 2; H315. Aquatic Chronic 2; H411.
EC No. 500-033-5 CAS 25068-38-6	Reaction product: Bisphenol-A- (epichlorhydrin) epoxy resin (number average molecular weight <=700)	< 3 %	Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. Aquatic Chronic 2; H411.

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

IF exposed or concerned: Get medical advice/attention. General information:

If medical advice is needed, have product container or label at hand. First aider: Pay

attention to self-protection!

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing.

If victim is at risk of losing consciousness, position and transport on their side.

Immediately get medical attention.

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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Following skin contact: Immediately clean with water and soap followed by thorough rinsing. Take off

immediately all contaminated clothing and wash it before reuse. In case of skin

reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids

apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye

irritation consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an

unconscious person. Do not induce vomiting. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if inhaled.

Causes skin irritation. May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Foam, extinguishing powder, water fog, carbon dioxide.

In case of large fires: Foam or water fog.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour. With air, vapours form potentially explosive mixtures, which are heavier than air. Vapours may proceed on the ground over great distances and cause fire and backflashes.

May form dangerous gases and vapours in case of fire.

Furthermore, there may develop: Hydrogen chloride, phosgene, aldehydes, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective

clothing.

Additional information: Hazchem-Code: 2Y

Heating will lead to pressure increase: Danger of bursting and explosion. Keep

containers cool with water spray.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the

risk of explosion.

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance

with the regulations of the local authorities.

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. If possible, eliminate leakage. Keep unprotected people away.

Avoid contact with the substance. Avoid aerosol and mist formation. Do not breathe vapour/aerosol/mist.

Ensure adequate ventilation, especially in confined areas.

Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

Cordon off downwind area at risk and warn inhabitants.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains. Danger of explosion! If necessary notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Beware of reignition. Thoroughly clean surrounding area.

In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.

Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid aerosol and mist formation. Do not breathe vapour/aerosol/mist.

Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse. Work place should be equipped with a shower and an eye rinsing apparatus.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Use only explosion-protected equipment/instruments. Do not weld.

In partially filled containers explosive mixtures may form.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.

Keep container dry. Keep only in the original container.

Protect from heat and direct sunlight. Store containers in upright position.

Storage temperature 18 - 25 °C.

Hints on joint storage: Do not store together with oxidizing agents, strong acids, strong alkalis or amines.

Keep away from food, drink and animal feedingstuffs.

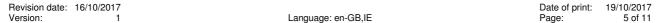
7.3 Specific end use(s)

No information available.

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Туре	Limit value
108-90-7	Chlorobenzene	Europe: IOELV: STEL	70 mg/m³; 15 ppm
		Europe: IOELV: TWA	23 mg/m³; 5 ppm
		Great Britain: WEL-STEL	14 mg/m³; 3 ppm
			(May be absorbed through the skin.)
		Great Britain: WEL-TWA	4.7 mg/m ³ ; 1 ppm
			(May be absorbed through the skin.)
		Ireland: 15 minutes	70 mg/m³; 15 ppm
		Ireland: 8 hours	23 mg/m³; 5 ppm

8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.

Personal protection equipment

Occupational exposure controls

Respiratory protection: When aerosols and vapours form: Use appropriate respiratory protection.

Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374.

Glove material: Fluororubber (Viton) - Layer thickness: 0.7 mm.

Breakthrough time: >480 min.

Unsuitable materials: Nitrile rubber, butyl caoutchouc (butyl rubber), fluoro rubber. Observe glove manufacturer's instructions concerning penetrability and breakthrough

time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Flame retardant, antistatic and chemical resistant protective clothing.

General protection and hygiene measures:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

Do not breathe vapour/aerosol/mist. Do not get in eyes, on skin, or on clothing. Take off

contaminated clothing and wash it before reuse.

When using do not eat or drink. Wash hands before breaks and after work. Work place should be equipped with a shower and an eye rinsing apparatus.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: liquid

Odour: characteristic
Odour threshold: No data available
pH value: No data available

Melting point/freezing point:
-46 °C (Chlorobenzene)
Initial boiling point and boiling range:
132 °C (Chlorobenzene)
Flash point/flash point range:
28 °C (c.c., Chlorobenzene)

Evaporation rate: No data available

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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Flammable liquid and vapour. Flammability:

Explosion limits: LEL (Lower Explosion Limit): 1.30 Vol-% (Chlorobenzene)

UEL (Upper Explosive Limit): 11.00 Vol-% (Chlorobenzene)

at 20 °C: 11.73 hPa (Chlorobenzene) Vapour pressure:

No data available Vapour density: No data available Density:

Water solubility: at 20 °C: 0.207 g/L (Chlorobenzene)

Partition coefficient: n-octanol/water: 3 log P(o/w) (Chlorobenzene)

Based on the n-octanol/water partition coefficient significant accumulation

in organisms is not expected.

No data available Auto-ignition temperature: No data available Decomposition temperature: No data available Viscosity, kinematic:

Explosive properties: Vapours can form explosive mixtures with air.

No data available Oxidizing characteristics:

9.2 Other information

Ignition temperature: 590 °C (Chlorobenzene)

SECTION 10: Stability and reactivity

10.1 Reactivity

Flammable liquid and vapour. Vapours can form explosive mixtures with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Heating will lead to pressure increase: Danger of bursting and explosion.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames.

Protect against direct sunlight.

10.5 Incompatible materials

Oxidising agent, strong acids, strong alkalis, amines

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are

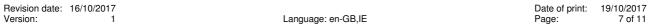
observed.

No data available Thermal decomposition:

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No

toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

ATEmix (calculated): 2000 mg/kg < ATE <= 5000 mg/kg.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

ATEmix (calculated): 2000 mg/kg < ATE <= 5000 mg/kg.

Acute toxicity (inhalative): Acute Tox. 4; H332 = Harmful if inhaled.

ATEmix (calculated, vapour): 10 mg/L < ATE <= 20 mg/L.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Eye damage/irritation: Lack of data.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data. Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Other information: Information about Chlorobenzene:

LD50 Rat, oral: > 2000 mg/kg. LC50 Rat, inhalative: 29.7 mg/L/4h.

Symptoms

Systemic effects: CNS disorders, tachycardia, blood pressure drop, agitation, spasms, ataxia (coordination impairment), narcosis, liver and kidney damage.

In case of inhalation:

Headache, mucous membrane irritation, fatigue, unconsciousness, narcosis.

Risk of resorption.

In case of ingestion: May be harmful if swallowed. Pain, vomiting (Danger of aspiration!), diarrhoea.

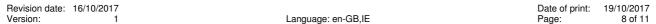
After contact with skin: Defatting properties may induce eczema.

After eye contact: May cause irritations.

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Information about Chlorobenzene:

Algae toxicity:

IC50 Pseudokirchneriella subcapitata (green algae): 11.4 mg/L/72h (OECD 201).

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 0.59 mg/L/48h (OECD 202).

Fish toxicity:

LC50 Lepomis macrochirus (bluegill): 4.5 - 7.4 mg/L/96h.

Information about Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number

average molecular weight <=700):

Algae toxicity:

EC50 Scenedesmus capricornutum: 11 mg/L/72h

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 1.8 mg/L/48h.

Fish toxicity:

LC50 Leuciscus idus: 2 mg/L/96h.

12.2 Persistence and degradability

Further details: Biodegradability:

Information about Chlorobenzene:

15 %/ 28 d (OECD 301 F). Not easily degradable.

Information about Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number

average molecular weight <=700):

5 % / 28 d(OECD 301 F). Not easily degradable.

Effects in sewage plants: Information about Chlorobenzene:

Bacterial toxicity:

EC50 activated sludge: 140 mg/L/30min. (OECD 209).

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

3 log P(o/w) (Chlorobenzene)

Based on the n-octanol/water partition coefficient significant accumulation in organisms

is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

AOX reference: The product contains organically bound halogen. Thus it may add to the AOX value.

General information: Do not allow to enter into ground-water, surface water or drains.

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 03 05* = Organic wastes containing hazardous substances

* = Evidence for disposal must be provided.

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal

regulations.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle empty containers with care.

Incineration may cause explosion.

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:

UN 1134

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 1134, CHLOROBENZENE, mixture

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1 IMDG: Class 3, Subrisk-

IATA-DGR: Class 3

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

14.5 Environmental hazards

Marine pollutant: yes

14.6 Special precautions for user

Land transport (ADR/RID)

ADR/RID: Kemmler-number 30, UN number UN 1134 Warning board:

Hazard label: 5 L Limited quantities: E1

P001 IBC03 LP01 R001 Contaminated packaging - Instructions:

MP19 Special provisions for packing together: Portable tanks - Instructions: T2 Portable tanks - Special provisions: TP1 **LGBF** Tank coding: Tunnel restriction code: D/E



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F-E, S-D EmS

Special provisions: 5 L Limited quantities: Excepted quantities: E1

P001, LP01 Contaminated packaging - Instructions:

Contaminated packaging - Provisions:

IBC03 IBC - Instructions: IBC - Provisions: Tank instructions - IMO: T2 Tank instructions - UN: Tank instructions - Provisions: TP1

Stowage and handling: Category A.

Colourless liquid with an almond-like odour. Flashpoint: 29°C c.c. Explosive Properties and observations:

limits: 1.3 to 11%. Immiscible with water.

Segregation group:

Air transport (IATA)

Hazard label: Flamm. liquid

Excepted Quantity Code:

Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L Passenger and Cargo Aircraft: Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L Cargo Aircraft only:

Emergency Response Guide-Code (ERG):

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

No data available

SECTION 15: Regulatory information

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

National regulations - Great Britain

Hazchem-Code: 2Y

No data available

National regulations - EC member states

Volatile organic compounds (VOC):

max. 91 % by weight

Labelling of packaging with <= 125mL content







Warning Signal word:

Hazard statements: May cause an allergic skin reaction. H317 Avoid breathing vapours/spray. Precautionary statements: P261

Wear protective gloves/protective clothing/eye protection. Take off contaminated clothing and wash it before reuse. P362+P364

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.



according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

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SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H226 = Flammable liquid and vapour.

H315 = Causes skin irritation.

H317 = May cause an allergic skin reaction.

H319 = Causes serious eye irritation.

H332 = Harmful if inhaled.

H411 = Toxic to aquatic life with long lasting effects.

Date of first version: 16/10/2017 Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.