



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product name	Armor Art Metallic Epoxy Pigment
Product type	Metallic copper

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

Identified uses	Industrial use.
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**1.3. Details of the supplier of the safety data sheet**

Supplier	Armor Chemical
	Abide-i Hürriyet Cad. No:211,34381
	Şişli/İstanbul
	Tel: 0 212 970 11 48
	Fax: 0 850 220 04 51
	<a href="mailto:info@armorchemical.com">info@armorchemical.com</a>

**1.4. Emergency telephone number**

Tel: 0 212 970 11 48

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**Classification (EC 1272/2008)**

Physical and Chemical Hazards	Not classified.
Human health	Skin Irrit. 2 - H315; Skin Sens. 1 – H317; Eye Irrit. 2 - H319
Environment	Aquatic Chronic 2 - H411

**2.2. Label elements**

**Label In Accordance With (EC) No. 1272/2008**



**Signal Word** Warning

**Contains** Reaction product: bisphenol-A- (epichlorohydrin)  
Reaction product: Bisphenol F- (epichlorohydrin)  
Alkyl (C12-14) glycidyl ether  
Poly(oxy-1,2-ethandiyl),.alpha.-[(2Z)-3-carboxy-1-oxo-2-propenyl]-.omega.-hydroxy-, C9-11-alkyl ethers

**Hazard Statements**

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.



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

**Precautionary Statements**

- 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.  
P501 Dispose of contents/container in accordance with national regulations.

**2.3. Other hazards**

No data available.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

Not applicable.

**3.2. Mixtures**

Name	EC No.	CAS No.	Content %	Classification (EC 1272/2008)
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight ≤ 700)	500-033-5	25068-38-6	40- 60 %	Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Eye Irrit. 2 - H319 Aquatic Chronic 2 - H411
Alkyl (C12-14) glycidyl ether	271-846-8	68609-97-2	10-20 %	Skin Irrit. 2 - H315 Skin Sens. 1 - H317
Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin	500-006-8	9003-36-5	10-20 %	Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411
Copper	231-159-6	7440-50-8	1-10 %	Acute Tox. 4 - H302 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411
Poly(oxy-1,2-ethandiyl),.alpha.-[(2Z)-3-carboxy-1-oxo-2-propenyl]-.omega.-hydroxy-, C9-11-alkyl ethers	---	709014-50-6	1-5 %	Skin Sens. 1 - H317

The Full Text for all Hazard Statements are Displayed in Section 16.

**Composition Comments**

The data shown are in accordance with the latest EC Directives.

**SECTION 4: FIRST AID MEASURES**

**4.1. Description of first aid measures**

**Inhalation**

Take victim immediately from exposure area to another location.  
Apply general first aid, rest and keep warm and provide fresh air. Get medical attention if any discomfort continues.

**Ingestion**

Never make an unconscious person vomit or drink fluids! Rinse mouth thoroughly. Get medical attention immediately!

**Skin contact**

Remove victim contamination area. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

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**Eye contact**

Take victim immediately from exposure area to another location. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention. Continue to washing with water.

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

- Inhalation** : Inhalation of dust may irritate the respiratory tract.  
**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.  
**Eye contact** : Causes eye irritation.

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

Treat symptomatically.

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**SECTION 5: FIREFIGHTING MEASURES**

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**5.1. Extinguishing media**

**Extinguishing media**

Fire can be extinguished using: Alcohol-resistant foam, water spray, Carbon dioxide (CO<sub>2</sub>) or dry chemical.

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards**

In case of fire, toxic gases may be formed. Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**5.3. Advice for firefighters**

**Special Fire Fighting Procedures**

Move container from fire area if it can be done without risk. In the event of fire, cool tanks with water spray. Keep run-off water out of sewers and water sources. Emergency personnel, except of course provide the move away from the fire area.

**Protective equipment for fire-fighters**

Use air-supplied respirator during fire fighting. Face mask, protective gloves and safety helmet.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Wear protective clothing as described in Section 8 of this safety data sheet.  
Avoid inhalation of vapours and contact with skin and eyes.  
Ventilate area of leak or spill.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

**Large Spillages:** Absorb with vermiculite, dry sand or earth and place into containers. Collect in containers and seal securely. Label containers appropriately. Remove containers and flush area with water.  
**Small Spillages:** Collect with absorbent, non-combustible material into suitable containers.

**6.4. Reference to other sections**

For personal protection, see section 8.  
See section 11 for additional information on health hazards.  
For waste disposal, see section 13.

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**SECTION 7: HANDLING AND STORAGE**

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**7.1. Precautions for safe handling**

Obtain special instructions before use. Avoid contact with skin and eyes. Do not inhale the vapours.  
Do not eat, drink or smoke when using the product.



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

**7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly closed original container in a dry, cool and well-ventilated place.  
Protect from direct sunlight. Keep away from food, drink and animal feeding stuffs.  
Keep containers upright. Isolate from incompatible substances.

**7.3. Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**Reaction product: bisphenol-A- (epichlorohydrin); epoxy resin (number average molecular weight  $\leq 700$ )**

**DNEL**

Long term systemic effects - inhalation	12.25 mg / m <sup>3</sup>
Acute systemic effects - inhalation	12.25 mg / m <sup>3</sup>
Long-term systemic effects-dermal	8.33 mg / kg bw / day
Acute systemic effects-dermal	8.33 mg / kg bw / day
Long-term systemic effects-dermal	3.571 mg / kg bw / day
Acute systemic effects-dermal	3.571 mg / kg bw / day
Long-term systemic effects-oral	0.75 mg / kg bw / day
Acute systemic effects-oral	0.75 mg / kg bw / day

**PNEC**

Fresh water	0.006 mg / l
Sea water	0.001 mg / l
Aqua (intermittent oscillations)	0.018 mg / l
STP	10 mg / l
Fresh water sediment	0.996 mg / kg sediment dw
Sea water sediment	0.1 mg / kg sediment dw
Soil	0.196 mg / kg soil dw
Oral	11 mg / kg food

**8.2. Exposure controls**

**Protective equipment**



**Process conditions**

Provide eyewash, quick drench

**Engineering measures**

Provide adequate ventilation.

**Respiratory equipment**

For emergencies use a full-facepiece positive-pressure, air-supplied respirator.

**Hand protection**

Use suitable protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Before removing gloves clean them with soap and water.

**Eye protection**

Use chemical safety goggles and/or foil face shield

**Hygiene measures**

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet.  
Promptly remove any clothing that becomes contaminated.



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

Wash promptly with soap & water if skin becomes contaminated.  
Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

**Skin protection**

Lab coat, apron or coveralls must be worn.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Liquid
<b>Colour</b>	No data available.
<b>Odour</b>	No data available.
<b>Solubility</b>	No data available.
<b>pH Value</b>	No data available.
<b>Initial boiling point and boiling range</b>	No data available.
<b>Melting Point</b>	No data available.
<b>Flash point</b>	No data available.
<b>Auto-Ignition Temperature</b>	No data available.
<b>Vapor Pressure</b>	No data available.
<b>Vapor density</b>	No data available.
<b>Density</b>	No data available.
<b>Specific Gravity(water=1)</b>	No data available.
<b>Viscosity</b>	No data available.
<b>Partition Coefficient (N-octanol/water)</b>	No data available.
<b>Explosive properties</b>	No data available.
<b>Oxidising properties</b>	No data available.

**9.2. Other information**

No data available.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1. Reactivity**

Stable under normal temperature conditions and recommended use.

**10.2. Chemical stability**

Stable under the prescribed storage conditions.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

Avoid extreme temperatures.

**10.5. Incompatible materials**

No data available.

**10.6. Hazardous decomposition products**

**Fire creates:** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**11.1. Information on toxicological effects**

**Acute toxicity**

**Reaction product: bisphenol-A- (epichlorohydrin); epoxy resin (number average molecular weight ≤ 700)**

Oral LD50 OECD 420 > 2000 mg/kg rat, female

Dermal LD50 OECD 402 > 2000 mg/kg 24 hours rat

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation:**

May cause an allergic skin reaction.

**Germ cell mutagenicity**

No data available.

**Carcinogenicity**

No data available.

**Reproduction Toxicity**

No data available.

**Specific target organ toxicity - single exposure**

No data available.

**Specific target organ toxicity - repeated exposure**

No data available.

**Aspiration hazard**

No data available.

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**SECTION 12: ECOLOGICAL INFORMATION**

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**12.1. Toxicity**

Toxic to aquatic life with long lasting effects.

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential**

No data available.

**12.4. Mobility in soil**

No data available.

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

No data available.

**12.6. Other adverse effects**

Should not be allowed to enter waterways.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**General information**

When handling waste, consideration should be made to the safety precautions applying to handling of the product.



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

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**13.1. Waste treatment methods**

Dispose empty containers, rubbish and waste in accordance with local authority requirements.  
Environmental manager must be informed of all major spillages. Contact specialist disposal companies.  
Please recycle empty pack. Do not re-use empty containers. Clean empty container with water.

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**SECTION 14: TRANSPORT INFORMATION**

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**General**

This substance/mixture may be classified as hazardous. However, it may be dispatched as non-hazardous substance in cases when the packaging is under limited / exceptional quantity. Please follow the relevant regulations.

**14.1. UN number**

UN No. (ADR/RID/ADN)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082

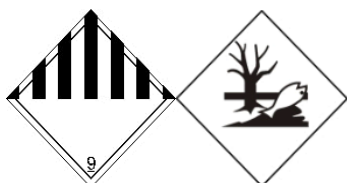
**14.2. UN proper shipping name**

**Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(reaction product: bisphenol-A-(epichlorhydrin))

**14.3. Transport hazard class(es)**

ADR/RID/ADN Class	9
ADR/RID/ADN Class	Class 9: Miscellaneous dangerous substances and articles
ADR Label No.	9
IMDG Class	9
ICAO Class/Division	9

**Transport Labels**



**14.4. Packing group**

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

**14.5. Environmental hazards**

**Environmentally Hazardous Substance/Marine Pollutant**

Yes.

**14.6. Special precautions for user**

Limited Quantities	5L
EMS	F-A, S-F
Emergency Action Code	•3Z
Hazard No. (ADR)	90



**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
According to Regulation (EU) No 2015/830

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**SECTION 15: REGULATORY INFORMATION**

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

**Guidance Notes**

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG(108).

**EU Legislation**

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. System of specific information relating to Dangerous Preparations. 2001/58/EC.

**15.2. Chemical Safety Assessment**

No chemical safety assessment has been carried out.

**SECTION 16: OTHER INFORMATION**

**Abbreviations and acronyms used in the safety data sheet**

ADR: European Agreement on International Carriage of Dangerous Goods by Road.

ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.

RID: European Agreement on International Carriage of Dangerous Goods by Rail.

IATA: International Air Transport Association.

ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

TWA: Time weighted average

ATE: Estimated value of acute toxicity

EC No: European Community number

CAS: Chemical Theory Service.

LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).

LC50: Substance concentration causing 50% (half) death in the test animals group.

EC50: Effective Concentration of the substance causing the maximum of 50%.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Permanent, Very Biofriendly.

SEA: Classification, labeling, packaging regulation

DNEL: Derivative Inactive Level

PNEC: Estimated Unaffected Concentration

STOT: Specific Target Organ Toxicity

**Revision Comments**

This is first issue.

**Issued By**

Büşra Tarakçı / **CRAD** Çevre Risk Analiz Denetim ve Eğitim Hizm. A.Ş.

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**Issued Note**

This SDS is prepared based on the information and documents received from product owner. CRAD or/and SDS author shall not be responsible for incorrect prepared of SDS and pecuniary loss or intangible damages because of deficient or wrong information and documents which comes from product owner.

**Hazard statements in full**

H302            Harmful if swallowed.

H315            Causes skin irritation.

H317            May cause an allergic skin reaction.

H319            Causes serious eye irritation.

H400            Very toxic to aquatic life.





**SAFETY DATA SHEET**  
**Armor Art Metallic Epoxy Pigment**  
**According to Regulation (EU) No 2015/830**

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H411 Toxic to aquatic life with long lasting effects.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.