

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 12-Jul-2019

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Version: 6.0

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

1.1. Product identifier

Trade name/designation:

E-Solder 3021 A

Additional information:

Manufacturer
Von Roll USA, Inc.
200 Von Roll Drive
SCHENECTADY, NY 12306
USA
Emergency telephone number +1 800-262-8200

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

Use of the substance/mixture:

Adhesives, sealants
Epoxy resin
For use in industrial installations and professional treatment only.

Relevant identified uses:

Life cycle stage [LCS]

IS: Use at industrial sites

PW: Widespread use by professional workers

Product Categories [PC]

PC 1: Adhesives, sealants

Uses advised against:

Life cycle stage [LCS]

C: Consumer use

* 1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Epoxy Produkte GmbH

Am Walde 24
29323 Wietze
Germany

Telephone: +49 (0)5146 9879965

Telefax: +49 (0)5146 9879964

E-mail: hs@epoxy-produkte.de

Website: www.epoxy-produkte.de

E-mail (competent person): hs@epoxy-produkte.de

1.4. Emergency telephone number

+49 (0)5146 9879965 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]-:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation (<i>Skin Sens. 1</i>)	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Acute 1</i>)	H400: Very toxic to aquatic life.	Calculation method.

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Hazard classes and hazard categories	Hazard statements	Classification procedure
Hazardous to the aquatic environment (Aquatic Chronic 1)	H410: Very toxic to aquatic life with long lasting effects.	Calculation method.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS07

Exclamation mark



GHS09

Environment

Signal word: Warning

Hazard components for labelling:

1,4-bis(2,3-epoxypropoxy)butane; Reaktionsprodukt: Bisphenol-A-Epichlorhydrinharze mit durchschnittlichem Molekulargewicht ≤ 700

hazard statements for health hazards	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Hazard statements for environmental hazards	
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements Prevention	
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.

Precautionary statements Response	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statements Storage	
P405	Store locked up.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.

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SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008- [CLP]	Concentration
CAS No.: 7440-22-4 EC No.: 231-131-3	silver Aquatic Acute 1, Aquatic Chronic 1  Warning H400-H410 M-factor (acute): 10	≥ 50 - ≤ 100 Wt %
CAS No.: 25068-38-6 EC No.: 500-033-5	Reaktionsprodukt: Bisphenol-A-Epichlorhydrinharze mit durchschnittlichem Molekulargewicht ≤ 700 Aquatic Chronic 2, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1   Warning H315-H317-H319-H411	≥ 25 - ≤ 50 Wt %
CAS No.: 2425-79-8 EC No.: 219-371-7	1,4-bis(2,3-epoxypropoxy)butane Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1  Warning H312-H315-H317-H319-H332	≥ 2.5 - ≤ 10 Wt %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

When in doubt or if symptoms are observed, get medical advice.

Never give anything by mouth to an unconscious person or a person with cramps.

Following inhalation:

Provide fresh air.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

Do not wash with: Solvents/Thinner

Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

In case of eye irritation consult an ophthalmologist.

After ingestion:

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

If swallowed, seek medical advice immediately and show this container or label.

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

No known symptoms to date.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Foam

ABC-powder

Water mist

5.2. Special hazards arising from the substance or mixture

No known hazardous reactions.

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment.

6.1.2. For emergency responders

Personal protection equipment:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Suitable material for taking up:
Sand, Universal binder, Earth

For cleaning up:

Clean with detergents. Avoid solvent cleaners.

Other information:

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Only allow access to authorised staff.

Fire prevent measures:

Usual measures for fire prevention.

Measures to prevent aerosol and dust generation:

Devices with local exhaust

Advices on general occupational hygiene

Thorough skin-cleansing after handling the product. Immediately remove any contaminated clothing, shoes or stockings. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Requirements for storage rooms and vessels:

Keep/Store only in original container.

Hints on storage assembly:

Do not store together with:
Food/feedstuff additives

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE)	silver CAS No.: 7440-22-4	① 0.01 mg/m ³ ② 0.02 mg/m ³ ⑤ (Silber, Verbindungen, anorganisch, berechnet als Ag); (ein atembare Fraktion)
IOELV (EU)	silver CAS No.: 7440-22-4	① 0.01 mg/m ³ ⑤ (Silver compounds, soluble, calculated as Ag)
WEL (GB)	silver CAS No.: 7440-22-4	① 0.01 mg/m ³ ⑤ (compounds, soluble; calculated as Ag)
TRGS 900 (DE)	silver CAS No.: 7440-22-4	① 0.1 mg/m ³ ② 0.8 mg/m ³ ⑤ (Metall, einatembare Fraktion)
IOELV (EU)	silver CAS No.: 7440-22-4	① 0.1 mg/m ³ ⑤ (metal)
WEL (GB)	silver CAS No.: 7440-22-4	① 0.1 mg/m ³ ⑤ (metal)

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Use protective skin cream before handling the product.

By long-term hand contact: Gloves with long cuffs

Suitable material:

CR (polychloroprene, chloroprene rubber)

Butyl caoutchouc (butyl rubber)

Breakthrough time (maximum wearing time) 2-4 h

Thickness of the glove material 0,5 mm

Respiratory protection:

Respiratory protection necessary at:
insufficient exhaust

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

Preventive industrial medical examinations are to be offered.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: not determined

Odour: not determined

Odour threshold: not determined

Safety relevant basis data

parameter		at °C	Method	Remark
pH	<i>not applicable</i>			
Melting point	<i>not determined</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not applicable</i>			
Decomposition temperature	<i>not determined</i>			
Flash point	<i>not determined</i>			
Evaporation rate	<i>not determined</i>			
Auto-ignition temperature	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	<i>not determined</i>			
Bulk density	<i>not determined</i>			
Water solubility	<i>not determined</i>			
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

no restriction

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

No information available.

Acute dermal toxicity:

No information available.

Acute inhalation toxicity:

No information available.

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Skin corrosion/irritation:

Irritating to skin.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitisation:

Skin sensitisation

Germ cell mutagenicity:

No information available.

Carcinogenicity:

No information available.

Reproductive toxicity:

No information available.

STOT-single exposure:

No information available.

STOT-repeated exposure:

No information available.

Aspiration hazard:

No information available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No.	Substance name	Toxicological information
7440-22-4	silver	NOEC: =0.13 mg/l 28 d EC₅₀: =0.002 mg/l EC10/7d

Assessment/classification:

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

CAS No.	Substance name	Biodegradation	Remark
7440-22-4	silver	No	

Additional information:

No information available.

12.3. Bioaccumulative potential

Bioconcentration factor (BCF):

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
7440-22-4	silver	—
25068-38-6	Reaktionsprodukt: Bisphenol-A-Epichlorhydrinharze mit durchschnittlichem Molekulargewicht <= 700	—
2425-79-8	1,4-bis(2,3-epoxypropoxy)butane	—

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. The PBT and vPvB criteria of Annex XIII to the Regulation do not apply to inorganic substances, such as silver.

12.6. Other adverse effects

No data available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

List of proposed waste codes/waste designations in accordance with EWC

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 04 09 *	Waste adhesives and sealants containing organic solvents or other dangerous substances
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*: Evidence for disposal must be provided.

Waste code packaging:

08 04 09 *	Waste adhesives and sealants containing organic solvents or other dangerous substances
------------	--









*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Package:

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

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN-No.			
UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (silver)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (silver)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (silver)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (silver)
14.3. Transport hazard class(es)			
 9	 9	 9	 9
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
 (silver)	 (silver)	 MARINE POLLUTANT (silver)	 (silver)

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.6. Special precautions for user			
Special provisions: 274 335 375 601 Limited quantity (LQ): 5 L Excepted Quantities: E1 Hazard identification number (Kemler No.): 90 Classification code: M6 Remark:	Special provisions: 274 335 375 601 Limited quantity (LQ): 5 L Excepted Quantities: E1 Classification code: M6 Remark:	Special provisions: 274 335 969 Limited quantity (LQ): 5 L Excepted Quantities: E1 EmS-No.: F-A, S-F Remark:	Special provisions: A97 A158 A197 Excepted Quantities: E1 Remark: A97, A158

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

15.1.1. EU legislation

Authorisations:

not applicable

Restrictions on use:

Use restriction according to REACH annex XVII, no.: not applicable

Other regulations (EU):

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: not applicable

RoHS - Directive 2011/65/EU: This product is compatible with the current ROHS-Directive.

15.1.2. National regulations

 **[DE] National regulations**

Water hazard class (WGK)

WGK:

3 - stark wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1. Indication of changes

1.3.	Details of the supplier of the safety data sheet
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16.2. Abbreviations and acronyms

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

-ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route)

-CAS: Chemical Abstract Service

-CLP: Classification, labelling and Packaging

-DNEL: Derived No Effect Level

-EC50: Effective Concentration 50%

-ECHA: European Chemical Agency

-LC50: Lethal Concentration 50%

-LD50: Lethal Dose 50%

-PBT: persistent, bioaccumulative, toxic

-PNEC: Predicted No Effect Concentration

-REACH: Registration, Evaluation and Authorization of Chemicals

-SVHC: Substance of Very High Concern

-VOC: Volatile organic compounds

-vPvB: very persistent, very bioaccumulative

16.3. Key literature references and sources for data

REACH Dissemination Portal

<https://echa.europa.eu/de/information-on-chemicals/registered-substances>

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]-:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Respiratory or skin sensitisation (<i>Skin Sens. 1</i>)	H317: May cause an allergic skin reaction.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Acute 1</i>)	H400: Very toxic to aquatic life.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Chronic 1</i>)	H410: Very toxic to aquatic life with long lasting effects.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.

16.6. Training advice

No data available

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16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

This Safety Data Sheet was drawn up by
TÜV SÜD Industrie Service GmbH (see below),
based on data from the supplier, who is named in section 1
and who is responsible for this document.

TÜV SÜD Industrie Service GmbH

Department Environmental Service

Westendstraße 199

80686 Munich - Germany

* Data changed compared with the previous version