

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830



Article No.: 2 05601 B0000 epple 5601
Print date 11.04.2022 Revision date 12.01.2022
Version 7.2 Issue date 12.01.2022

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

1.1. Product identifier

Article No. (manufacturer/supplier): 2 05601 B0000
Trade name/designation epple 5601
Adhesive
Component B

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

Relevant identified uses:
Adhesive for the gluing of most diverse substrates.

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

E. Epple & Co. GmbH
Hertzstr. 8
71083 Herrenberg

Telephone: +49 7032 / 9771-17
Telefax: +49 7032 / 9771-60
www.epple-chemie.de

Department responsible for information:

laboratory
E-mail (competent person) labor@epple-chemie.de

1.4. Emergency telephone number

Information center against poisoning Bonn +49 (0) 228 / 19 240 (Advice in German)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.

2.2. Label elements

The product is classified and labelled according to EC directives or corresponding national laws.

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

Hazard pictograms



Danger

Hazard statements

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

Precautionary statements

P260 Do not breathe vapour.
P280 Wear protective gloves.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

Hazard components for labelling

Amines, polyethylenepoly-, triethylenetetramine fraction
reaction product: bisphenol-A-(epichlorhydrin)
N- (3- (trimethoxysilyl) propyl) ethylenediamine

Supplemental hazard information

not applicable

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description modified aminic hardener

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
292-588-2 90640-67-8	01-2119487919-13 Amines, polyethylenepoly-, triethylenetetramine fraction Acute Tox. 4 H302 / Acute Tox. 4 H312 / Skin Corr. 1B H314 / Skin Sens. 1 H317 / Aquatic Chronic 3 H412	2,4 - 9,9
217-164-6 1760-24-3	01-2119970215-39 N- (3- (trimethoxysilyl) propyl) ethylenediamine Acute Tox. 4 H332 / Eye Dam. 1 H318 / Skin Sens. 1 H317	0,9 - 2,4
500-033-5 25068-38-6 603-074-00-8	01-2119456619-26 reaction product: bisphenol-A-(epichlorhydrin) Eye Irrit. 2 H319 / Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Aquatic Chronic 2 H411 Specific concentration limit (SCL): Eye Irrit. 2 H319 >= 5 / Skin Irrit. 2 H315 >= 5	0,1 - 0,9

Additional information

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

strong water jet

5.2. Special hazards arising from the substance or mixture

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Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters

Provide a conveniently located respiratory protective device. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

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). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid contact with skin, eyes and clothes. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Follow the legal protection and safety regulations.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 5 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

not applicable

DNEL:

4,4'-methylene diphenyl diglycidyl ether

Index No. 603-073-00-2 / EC No. 216-823-5 / CAS No. 1675-54-3

DNEL acute dermal, short-term (systemic), Workers: 8,3 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 8,3 mg/kg bw/day

DNEL acute inhalative (systemic), Workers: 12,3 mg/m³

DNEL long-term inhalative (systemic), Workers: 12,3 mg/m³

N- (3- (trimethoxysilyl) propyl) ethylenediamine

EC No. 217-164-6 / CAS No. 1760-24-3

DNEL long-term dermal (systemic), Workers: 5 mg/kg bw/day

DNEL long-term inhalative (systemic), Workers: 35,5 mg/m³

Amines, polyethylenepoly-, triethylenetetramine fraction

EC No. 292-588-2 / CAS No. 90640-67-8

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DNEL long-term dermal (systemic), Workers: 0,57 mg/kg bw/day
DNEL acute inhalative (local), Workers: 5380 mg/m³
DNEL long-term inhalative (systemic), Workers: 1 mg/m³

PNEC:

4,4'-methylene diphenyl diglycidyl ether
Index No. 603-073-00-2 / EC No. 216-823-5 / CAS No. 1675-54-3

PNEC aquatic, freshwater: 3 µg/L
PNEC aquatic, marine water: 0,3 µg/L
PNEC aquatic, intermittent release: 0,013 mg/L
PNEC sediment, freshwater: 0,5 mg/kg dw
PNEC sediment, marine water: 0,5 mg/kg dw
PNEC, soil: 0,05 mg/kg dw
PNEC sewage treatment plant (STP): 10 mg/L

N- (3- (trimethoxysilyl) propyl) ethylenediamine
EC No. 217-164-6 / CAS No. 1760-24-3

PNEC aquatic, freshwater: 0,062 mg/L
PNEC aquatic, marine water: 0,0062 mg/L
PNEC aquatic, intermittent release: 0,62 mg/L
PNEC sediment, freshwater: 0,22 mg/kg
PNEC sediment, marine water: 0,022 mg/kg
PNEC, soil: 0,0085 mg/kg
PNEC sewage treatment plant (STP): 25 mg/L

Amines, polyethylenepoly-, triethylenetetramine fraction
EC No. 292-588-2 / CAS No. 90640-67-8

PNEC aquatic, freshwater: 0,19 mg/L
PNEC aquatic, marine water: 0,038 mg/L
PNEC aquatic, intermittent release: 0,2 mg/L
PNEC sediment, freshwater: 95,9 mg/kg d.w.
PNEC sediment, marine water: 19,2 mg/kg d.w.
PNEC, soil: 19,1 mg/kg d.w.
PNEC sewage treatment plant (STP): 4,25 mg/L

8.2. Exposure controls

Personal protection equipment

Respiratory protection

Recommendation: full mask / half mask / filtering half mask. Type A / B class 1/2 Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Wear closely fitting protective glasses in case of splashes.

Body protection

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Appearance: Liquid

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Colour:	black
Odour:	characteristic
Odour threshold:	not applicable
pH at 20 °C:	not relevant
Melting point/freezing point:	-35 °C Source: Amines, polyethylenepoly-, triethylenetetramine fraction
Initial boiling point and boiling range:	not applicable
Flash point:	175 °C
Evaporation rate:	not applicable
flammability	
Burning time:	not applicable
Upper/lower flammability or explosive limits:	
Lower explosion limit:	not applicable
Upper explosion limit:	not applicable
Vapour pressure at 20 °C:	not applicable
Vapour density:	not applicable
Relative density:	
Density at 20 °C:	1,30 g/cm³
Solubility(ies):	
Water solubility at 20 °C:	insoluble
Partition coefficient: n-octanol/water:	see section 12
Auto-ignition temperature:	not applicable
Decomposition temperature:	not applicable
Viscosity at °C:	21 - 25 Pa*s
Explosive properties:	not applicable
Oxidising properties:	not applicable
9.2. Other information	
Solvent separation test:	< 3 weight-% (ADR/RID)

SECTION 10: Stability and reactivity

- 10.1. **Reactivity**
No information available.
- 10.2. **Chemical stability**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.
- 10.3. **Possibility of hazardous reactions**
Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.
- 10.4. **Conditions to avoid**
Hazardous decomposition byproducts may form with exposure to high temperatures.
- 10.5. **Incompatible materials**
not applicable
- 10.6. **Hazardous decomposition products**
Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

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

11.1. Information on toxicological effects

Acute toxicity

4,4'-methylene diphenyl diglycidyl ether
oral, LD50, Rat: > 2000 mg/kg
dermal, LD50, Rat: > 2000 mg/kg

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Method: OECD 402
dermal, LD50, Rabbit: > 2000 mg/kg

Amines, polyethylenepoly-, triethylenetetramine fraction
oral, LD50, Rat: 1717 mg/kg
dermal, LD50, Rat: 1720 mg/kg
dermal, LD50, Rabbit: 1465 mg/kg

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Based on available data, the classification criteria are not met.

STOT-single exposure; STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Remark

There is no information available on the preparation itself.

SECTION 12: Ecological information

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

Partition coefficient: n-octanol/water: Mixtures: Not applicable. Do not allow to enter into surface water or drains.

12.1. Toxicity

4,4'-methylene diphenyl diglycidyl ether

Fish toxicity, LC50: 1,3 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50: 2,1 mg/L (48 h)

Method: OECD 202

Amines, polyethylenepoly-, triethylenetetramine fraction

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 31,1 mg/L (48 h)

Method: EU C.2

Fish toxicity, EC50, Pimephales promelas (fathead minnow): 330 mg/L (72 h)

Method: OECD 201

Algae toxicity, EC50, Pseudokirchneriella subcapitata: 2,2 mg/L (72 h)

Long-term Ecotoxicity

4,4'-methylene diphenyl diglycidyl ether

Daphnia toxicity, NOEC: 0,3 mg/L (21 d)

Method: OECD 211

12.2. Persistence and degradability

4,4'-methylene diphenyl diglycidyl ether

Biodegradation: 5 % (28 d); Evaluation Not readily biodegradable (according to OECD criteria)

Method: OECD 301F

Biodegradation: 6 - 12 % (28 d); Evaluation Not readily biodegradable (according to OECD criteria)

Method: OECD 301B

12.3. Bioaccumulative potential

Amines, polyethylenepoly-, triethylenetetramine fraction

Partition coefficient: n-octanol/water: -2,65

Bioconcentration factor (BCF)

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4,4'-methylene diphenyl diglycidyl ether
Bioconcentration factor (BCF): 3 - 31

Amines, polyethylenepoly-, triethylenetetramine fraction
Bioconcentration factor (BCF): < 1

12.4. Mobility in soil

Toxicological data are not available.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

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

080409* Waste adhesives and sealants containing organic solvents or other dangerous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package Recommendation

Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number

UN 2735

14.2. UN proper shipping name

Land transport (ADR/RID):

Amines, liquid, corrosive, n.o.s.

Sea transport (IMDG):

AMINES, LIQUID, CORROSIVE, N.O.S.

Air transport (ICAO-TI / IATA-DGR):

Amines, liquid, corrosive, n.o.s.

14.3. Transport hazard class(es)

8

14.4. Packing group

II

14.5. Environmental hazards

Land transport (ADR/RID)

not applicable

Marine pollutant

not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

tunnel restriction code

E

Sea transport (IMDG)

EmS-No.

F-A, S-B

Air transport (ICAO-TI / IATA-DGR)

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

not applicable

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC-value (in g/L): 0

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
 Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Substance/product listed in the following inventories:

AICS no information
 DSL no information
 IECSC no information
 KECI no information
 MITI no information
 PICCS no information
 TSCA no information

15.2. Chemical Safety Assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

EC No. CAS No.	Designation	REACH No.
292-588-2 90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	01-2119487919-13
217-164-6 1760-24-3	N- (3- (trimethoxysilyl) propyl) ethylenediamine	01-2119970215-39
500-033-5 25068-38-6	reaction product: bisphenol-A-(epichlorhydrin)	01-2119456619-26

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air

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IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Abbreviations and acronyms

n.a. = not applicable
n.b. = not determined

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.