Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

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

1.1. **Product identifier**

Article No. (manufacturer/supplier): 4 07225 B0000
Trade name/designation: epple 07225
Cast Resin
component B
UFI: PN70-706E-K00F-QDYE

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

Relevant identified uses
Casting resin for casting electronic and other components.

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 Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

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

Warning

Hazard statements

H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of contents / container to a certified waste management company.

Hazard components for labelling
hydrophilic, aliphatic polyisocyanate
hexamethylene-di-isocyanate

Supplemental hazard information
EUH204 Contains isocyanates. May produce an allergic reaction.

Use restriction according to REACH annex XVII, no.: 74
Restrictions on use
As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. **Other hazards**

No information available.

SECTION 3: Composition/information on ingredients

3.2. **Mixtures**

Description aliphatic polyisocyanates

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
125252-47-3	hydrophilic, aliphatic polyisocyanate Acute Tox. 4 H332 / Skin Sens. 1B H317 / STOT SE 3 H335 / Aquatic Chronic 2 H411	74,9 - 100
212-485-8 822-06-0 615-011-00-1	01-2119457571-37 hexamethylene-di-isocyanate Acute Tox. 3 H331 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Resp. Sens. 1 H334 / Skin Sens. 1 H317 / STOT SE 3 H335 Specific concentration limit (SCL): Resp. Sens. 1 H334 >= 0,5 / Skin Sens. 1 H317 >= 0,5	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**

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.

Additional information

Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

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

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). Use appropriate container to avoid environmental contamination. Fouled surfaces must be immediately cleaned with suitable solvents, Useable as such (flammable): water 45 vol.% ethanol or i-propanol 50 vol. % ammonia solution (density= 0.88) 5 vol.%
Alternative (non-flammable): sodium carbonate 5 vol.% water 95 vol.%.
Take up spilled residuals with the same agent and leave them for a few days in unclosed containers until there is no further reaction. Then, close the containers and dispose of them in accordance with the regulations for waste removal (refer to section 13).

6.4. **Reference to other sections**

Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture.
People who spray this preparation should have regular pulmonary function tests.

7.1. **Precautions for safe handling**

Advices on safe handling

Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard.

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. Keep away from amines, alcohols and water.

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

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture.
People who spray this preparation should have regular pulmonary function tests.

8.1. **Control parameters**

Occupational exposure limit values

not applicable

8.2. **Exposure controls** *

Personal protection equipment

Respiratory protection

If the workplace limit values (AGW) are exceeded, a suitable breathing apparatus must be worn. 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.
Use filter / combination filter according to EN 14387.
Suitable respiratory protection apparatus: ABEK-P2

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 eye glasses with side protection according to EN 166.

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**

Physical state:	**Liquid**
Appearance:	**Liquid**
Colour:	**yellow**
Odour:	**characteristic**
Odour threshold:	**not applicable**
Melting point/freezing point:	**not applicable**
Initial boiling point and boiling range:	**not applicable**
Flammability:	**Flammable solid.**
Lower and upper explosion limit:	
Lower explosion limit:	**not applicable**
Upper explosion limit:	**not applicable**
Flash point:	**215 °C**
Auto-ignition temperature:	**not applicable**
Decomposition temperature:	**not applicable**
pH at 20 °C:	**not applicable**
Cinematic viscosity (40°C):	**3913,04 mm²/s**
Viscosity at 20 °C:	**3 - 6 Pa*s**
Solubility(ies):	
Water solubility at 20 °C:	**insoluble**
Partition coefficient: n-octanol/water:	**see section 12**
Vapour pressure at 20 °C:	**not applicable**
Density and/or relative density:	
Density at 20 °C:	**1,15 g/cm³**
Relative vapour density:	**not applicable**
particle characteristics:	**not applicable**

9.2. **Other information**

Solid content:	**100 weight-%**
solvent content:	
Organic solvents:	**0 weight-%**

Water:	**0 weight-%**
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 strongly acidic and alkaline materials as well as oxidizers. Keep away from amines, alcohols and water. Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

10.4. **Conditions to avoid**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.
Thermal decomposition: at > 260 °C:.

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

11.1. **Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity

hydrophilic, aliphatic polyisocyanate
oral, LD50, Rat: > 2000 mg/kg
Toxicological study on a comparable product
inhalative (dust and mist), LC50, Rat: 0,39 mg/L (4 h)
Method: OECD 403
Investigation on a comparable product

Skin corrosion/irritation; Serious eye damage/eye irritation

hydrophilic, aliphatic polyisocyanate
eyes, Rabbit: Evaluation mild irritant.
Method: OECD 405
Toxicological study on a comparable product
Skin, Rabbit: Evaluation mild irritant.
Method: OECD 404
Toxicological study on a comparable product

Respiratory or skin sensitisation

May cause an allergic skin reaction.

hydrophilic, aliphatic polyisocyanate
Skin, Guinea pig: ; Evaluation sensitising
Method: OECD 406
Toxicological study on a comparable product

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

hydrophilic, aliphatic polyisocyanate
Reproductive toxicity; Evaluation not mutagenic
Method: OECD 471 (Ames test).
Toxicological study on a comparable product

STOT-single exposure; STOT-repeated exposure

May cause respiratory irritation.

hydrophilic, aliphatic polyisocyanate
Specific target organ toxicity (single exposure), Irritation Evaluation May cause respiratory irritation.

Investigation on a comparable product

Aspiration hazard

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

Practical experience/human evidence

Because of the isocyanate components' properties of this and with consideration of similar preparations the following applies: This mixture may cause acute irrtation and/or sensitization of airways which lead to tightness in thorax, short-breath and asthmatic complaints. After sensitization even concentrations below the exposure limit values may cause asthma. Repeated inhaling can lead to permanent illness of the respiratory tract. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin.

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 . The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified according to the toxicological dangers.See chapters 2 and 15 for details.

11.2. **Information on other hazards**

Endocrine disrupting properties
No information available.

SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]
Do not allow to enter into surface water or drains.

12.1. **Toxicity**

hydrophilic, aliphatic polyisocyanate
Fish toxicity, LC50, Danio rerio : 31,6 mg/L (96 h)
Method: OECD 203
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 9,5 mg/L (48 h)
Method: OECD 202
Algae toxicity, ErC50, Scenedesmus subspicatus: > 100 mg/L (72 h)
Method: OECD 201
Bacteria toxicity, EC50, Activated sludge: > 10000 mg/L
Method: OECD 209
Investigation on a comparable product

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

12.2. **Persistence and degradability**

hydrophilic, aliphatic polyisocyanate
Biodegradation: Evaluation Not readily biodegradable (according to OECD criteria)
Method: OECD 301F

12.3. **Bioaccumulative potential**
Toxicological data are not available.

Bioconcentration factor (BCF)

Toxicological data are not available.

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. **Endocrine disrupting properties**
No information available.

12.7. **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. Handle contaminated packages in the same way as the substance itself.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.
Observe in addition any national regulations!

List of proposed waste codes/waste designations in accordance with EWC
080501* Waste isocyanates
*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package
Dispose of packaging and contaminated filters at a offical hazardous waste incinerator facility.
Recommendation:
Waste codes / waste designations according to EWC / AVV: 15 01 10*

Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1. **UN number or ID number**

UN 3082

14.2. **UN proper shipping name**

Land transport (ADR/RID):	Environmentally hazardous substance, liquid, n.o.s. (Aliphatisches Polyisocyanat)
Sea transport (IMDG):	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Aliphatisches Polyisocyanat)
Air transport (ICAO-TI / IATA-DGR):	Environmentally hazardous substance, liquid, n.o.s. (Aliphatisches Polyisocyanat)

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

9

14.4. **Packing group**

III

14.5. **Environmental hazards**

Land transport (ADR/RID)	DANGEROUS FOR THE ENVIRONMENT
Marine pollutant	p / Aliphatisches Polyisocyanat

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	-
in packages <= 5 litres	KEIN GUT DER KLASSE 9

Sea transport (IMDG)

EmS-No.	F-A, S-F
in packages <= 5 litres	NOT RESTRICTED 2.10.2.7

Air transport (ICAO-TI / IATA-DGR)

in packages <= 5 litres	NOT RESTRICTED

14.7. **Maritime transport in bulk according to IMO instruments**

No transport as bulk according IBC - Code.

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

Use restriction according to REACH annex XVII, no.: 74
Restrictions on use
As from 24 August 2023 adequate training is required before industrial or professional use.

National regulations

Restrictions of occupation
Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

For professional use only. Product is not intended for consumer use.

Substance/product listed in the following inventories:
AICS no informtion
DSL no information
EHS no information
IECSC no information
KECI no information
MITI no information
NZLoC no information
PICCS no information
TCSI 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.
212-485-8 822-06-0	hexamethylene-di-isocyanate	01-2119457571-37

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Sens. 1B / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Acute Tox. 3 / H331	Acute toxicity (inhalative)	Toxic if inhaled.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Resp. Sens. 1 / H334	Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.

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

Skin Sens. 1	Respiratory or skin sensitisation	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	Calculation method.

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
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.

* Data changed compared with the previous version