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):	2 HF000 00000
Trade name/designation	epple HF transparent UFI: 1S30-F04J-T006-X1RH

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

Relevant identified uses:
Adhesive for bonding a wide variety of 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].

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.

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

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501	Dispose of contents/ container to an approved waste disposal plant.

Hazard components for labelling
ethyl acetate

Supplemental hazard information

EUH066	Repeated exposure may cause skin dryness or cracking.

2.3. **Other hazards**

No information available.

SECTION 3: Composition/information on ingredients

3.2. **Mixtures**

Description PVC-Copolymerizate

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
205-500-4 141-78-6 607-022-00-5	01-2119475103-46 ethyl acetate Eye Irrit. 2 H319 / STOT SE 3 H336 / Flam. Liq. 2 H225 / EUH066	74,9 - 100

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. 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 formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. 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. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Further information
Vapours are heavier than air. Vapours form explosive mixtures with air.

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. Floors must be electrically conductive.

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

ethyl acetate
Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6
TWA: 730 mg/m3; 200 ppm
STEL: 1460 mg/m3; 400 ppm

Additional information
TWA : Long-term occupational exposure limit value
STEL : short-term occupational exposure limit value
Ceiling : peak limitation

DNEL:

ethyl acetate
Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6
DNEL short-term oral (acute), Workers:
DNEL long-term dermal (systemic), Workers: 63 mg/kg bw/day
DNEL acute inhalative (local), Workers: 1468 mg/m³
DNEL acute inhalative (systemic), Workers: 1468 mg/m³
DNEL long-term inhalative (local), Workers: 734 mg/m³
DNEL long-term inhalative (systemic), Workers: 734 mg/m³
DNEL short-term oral (acute), Consumer:
DNEL long-term dermal (systemic), Consumer: 37 mg/kg bw/day

PNEC:

ethyl acetate
Index No. 607-022-00-5 / EC No. 205-500-4 / CAS No. 141-78-6
PNEC aquatic, freshwater: 0,26 mg/L
PNEC aquatic, marine water: 0,026 mg/L
PNEC aquatic, intermittent release: 1,65 mg/L
PNEC sediment, freshwater: 1,25 mg/kg
PNEC sediment, marine water: 0,125 mg/kg
PNEC, soil: 0,24 mg/kg
PNEC sewage treatment plant (STP): 650 mg/L

8.2. **Exposure controls**

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. 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.

Body protection

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

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:	**translucent**
Odour:	**like Solvents**
Odour threshold:	**not applicable**
Melting point/freezing point:	**-83 °C** Source: ethyl acetate
Initial boiling point and boiling range:	**77 °C** Source: ethyl acetate
Flammability:	**Highly flammable liquid and vapour.**
Lower and upper explosion limit:	
Lower explosion limit:	**2 Vol-%** Source: ethyl acetate
Upper explosion limit:	**12,8 Vol-%** Source: ethyl acetate
Flash point:	**-4 °C**

Auto-ignition temperature:	**470 °C** Source: ethyl acetate
Decomposition temperature:	**not applicable**
pH at 20 °C:	**not relevant**
Kinematic viscosity (40°C):	**495,05 mm²/s**
Viscosity at 20 °C:	**0,1 - 1,0 Pa*s**
Solubility(ies):	
Water solubility at 20 °C:	**insoluble**
Partition coefficient: n-octanol/water:	**see section 12**
Vapour pressure at 20 °C:	**98,4 mbar** Source: ethyl acetate
Density and/or relative density:	
Density at 20 °C:	**1,01 g/cm³**
Relative vapour density:	**not applicable**
particle characteristics:	**not applicable**

9.2. **Other information**

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

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

Acute toxicity

ethyl acetate
oral, LD50, Rat: > 2000 mg/kg
dermal, LD50, Rabbit: > 18000 mg/kg
inhalative (vapours), LC50, Rat: > 22,5 mg/L (6 h); Evaluation The substance or mixture has no acute respiratory toxicity

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes serious eye irritation.

ethyl acetate
Skin, Rabbit (4 h): Evaluation non-irritant.
eyes, Rabbit: Evaluation mild irritant.
Method: OECD 405

Respiratory or skin sensitisation

ethyl acetate
Skin, Skin sensitization according to Magnusson/Kligman (maximization test), Guinea pig: ; Evaluation not sensitising.
Method: OECD 406

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

ethyl acetate

Reproductive toxicity; Evaluation From the available data there are no indications of reproductive toxicity.
genotoxicity; Evaluation No evidence of a mutagenic effect.
Method: OECD 471 (Ames test)
in-vitro; Salmonella typhimurium; with and without metabolic activation
genotoxicity; Evaluation negative
Method: OECD 473
in-vitro; Chinese hamster ovary cells; with and without metabolic activation
genotoxicity; Evaluation negative
Method: OECD 476
in-vitro; mouse lymphoma cells; with and without metabolic activation
genotoxicity; Evaluation negative
Method: OECD 474
in-vivo; Mouse

STOT-single exposure; STOT-repeated exposure

May cause drowsiness or dizziness.

Aspiration hazard

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

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. 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. Splashing may cause eye irritation and reversible damage.

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 .

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**

ethyl acetate
Fish toxicity, LC50, Pimephales promelas (fathead minnow): 230 mg/L (96 h)
Flow test
Daphnia toxicity, EC50, Daphnia cucullata: 165 mg/L (48 h)
aquatic, freshwater
Algae toxicity, ErC50, Desmodesmus subspicatus: > 100 mg/L (72 h)
Method: OECD 201
Bacteria toxicity, NOEC:, Pseudomonas putida: 650 mg/L (16 h)
Method: DIN 38412
Fish toxicity, EC50: 220 mg/L (96 h)
Daphnia toxicity, EC50, Artemia salina: 346 mg/L (24 h)
aquatic, marine water

Long-term Ecotoxicity

ethyl acetate
Fish toxicity, NOEC, Pimephales promelas (fathead minnow): < 9,65 mg/L (32 d)
Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 2,4 mg/L (21 d)
Bacteria toxicity, NOEC, Pseudomonas putida: 650 mg/L (16 h)
Method: DIN 38412

12.2. **Persistence and degradability**

ethyl acetate
Biodegradation, aerobic: 69 % (20 d); Evaluation Readily biodegradable
oxygen consumption: 62 % (5 d)

12.3. **Bioaccumulative potential**

ethyl acetate
Partition coefficient: n-octanol/water: 0,68

Bioconcentration factor (BCF)

ethyl acetate
Bioconcentration factor (BCF), Leuciscus idus (golden orfe): 30

12.4. **Mobility in soil**

ethyl acetate
soil, Adsorption: Evaluation Due to the low n-octanol/water distribution coefficient, adsorption on the ground is not to be expected.

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. 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!

Switzerland: Disposal in accordance with the Ordinance on the Transport of Waste (VeVA) and the Ordinance on the Avoidance and Disposal of Waste (VVEA).

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
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 1133

14.2. **UN proper shipping name**

Land transport (ADR/RID):	Adhesives
Sea transport (IMDG):	ADHESIVES
Air transport (ICAO-TI / IATA-DGR):	Adhesives

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

3

14.4. **Packing group**

Land transport (ADR/RID):	III
for packages > 450 litres:	II
Sea transport (IMDG):	III
for packages > 450 litres	II

Air transport (ICAO-TI / IATA-DGR):	III
for packages > 30 litres:	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
for packages > 450 litres:	D/E special prescription 640D

Sea transport (IMDG)

EmS-No.	F-E, S-D

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): 759

National regulations

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

Switzerland: Maternity Protection Ordinance (SR 822.111.52): Pregnant women and nursing mothers may only come into contact with or be exposed to this preparation during their work if it has been established on the basis of a risk assessment by a specialist that, in the context of the activities and the protective measures taken, exposure will not result in harm to the mother or child.

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

Switzerland: Youth Labour Protection Ordinance (ArGV 5; SR 822.115): Young people up to the age of 18 may only come into contact with or be exposed to this preparation during their work if the Federal Office for Professional Education and Technology (OPET) or the State Secretariat for Economic Affairs (SECO) has authorised an exception.

Further details:

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

Substance/product listed in the following inventories:
AICS listed
DSL listed
EHS no information
IECSC listed
KECI listed
MITI listed
NZLoC no information
PICCS no information
TCSI no information
TSCA listet

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.
205-500-4 141-78-6	ethyl acetate	01-2119475103-46

SECTION 16: Other information

Full text of classification in section 3

Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.

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

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.