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

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

1.1. **product identifiers**

Article No. (manufacturer/supplier)	114-4202
Identification of the substance or mixture	FEYCARBON Härter HS 420 normal

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

Relevant identified uses:
Hardener

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

manufacturer

FEYCOLOR GmbH
Maxhuettenstraße 6
93055 Regensburg

Telephone: 0049 (0)941/60 49 7-0
Telefax: 0049 (0)941/60 49 7-30
E-mail info@feycolor.com
Website: www.feycolor.com

Dept. responsible for information:

Department for dangerous goods	0049 (0)941/60 49 7-0
E-mail (competent person)	sd@feycolor.com

1.4. **Emergency telephone number**

Emergency telephone number	+49 (0) 700 24 11 21 12 (FCM)
Österreichische Vergiftungsinformationszentrale	+43 (0) 1406 43 43

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. 3 / H226	Flammable liquids	Flammable liquid and vapour.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.
STOT SE 3 / H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.

2.2. **Label elements**

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

Hazard pictograms

Warning

Hazard statements

H226	Flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H335	May cause respiratory 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 dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405	Keep locked up.

Hazard components for labelling

1,6-Hexamethylene diisocyanate homopolymer
n-butyl acetate

2-butoxyethyl acetate

Supplemental Hazard information (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH204 Contains isocyanates. May produce an allergic reaction.

2.3. **Other hazards**

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

SECTION 3: Composition / information on ingredients

3.2. **Mixtures**

Product description / chemical characterization

Description Mixture of substances listed below with nonhazardous additions.

Hazardous ingredients

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

EC No. CAS No. INDEX No.	REACH No. Chemical name classification // Remark	Wt %
500-060-2 28182-81-2	01-2119485796-17 1,6-Hexamethylene diisocyanate homopolymer Acute Tox. 4 H332 / Skin Sens. 1 H317 / STOT SE 3 H335	50 < 100
204-658-1 123-86-4 607-025-00-1	01-2119485493-29 n-butyl acetate Flam. Liq. 3 H226 / STOT SE 3 H336	20 < 25
203-603-9 108-65-6 607-195-00-7	01-2119475791-29 2-methoxy-1-methylethyl acetate Flam. Liq. 3 H226	12,5 < 20
203-933-3 112-07-2 607-038-00-2	01-2119475112-47 2-butoxyethyl acetate Acute Tox. 4 H302 / Acute Tox. 4 H312 / Acute Tox. 4 H332	5 < 10

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.

After 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**

No special measures are necessary.

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media:
alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Extinguishing media which must not be used for safety reasons:
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. 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**
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.

Precautions against fire and explosion:
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. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

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 15 °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.

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters**
Occupational exposure limit values:

n-butyl acetate
INDEX No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4

MEL/OES, TWA: 724 mg/m3; 150 ppm
MEL/OES, STEL: 966 mg/m3; 200 ppm

2-methoxy-1-methylethyl acetate
INDEX No. 607-195-00-7 / EC No. 203-603-9 / CAS No. 108-65-6

WEL, TWA: 274 mg/m3; 50 ppm
WEL, STEL: 548 mg/m3; 100 ppm

2-butoxyethyl acetate
INDEX No. 607-038-00-2 / EC No. 203-933-3 / CAS No. 112-07-2

WEL, TWA: 133 mg/m3; 20 ppm
WEL, STEL: 332 mg/m3; 50 ppm
Remark: (May be absorbed through the skin.)

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

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.

Occupational exposure controls

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.

Hand protection
For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)
Thickness of the glove material 0,7 mm; Breakthrough time (maximum wearing time) 60 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 DIN EN 374
Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye protection
Wear closely fitting protective glasses in case of splashes.

Protective clothing
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 chapter 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

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

Appearance:	
Physical state:	**Liquid**
Colour:	**refer to label**
Odour:	**characteristic**
Odour threshold:	**not applicable**
pH at20 °C:	**n.a.**
Melting point/freezing point:	**not applicable**
Initial boiling point and boiling range:	**124 °C** Source: n-butyl acetate
Flash point:	**27 °C**

Evaporation rate:	**not applicable**
Flammability (solid, gas):	
Burning time (s):	**not applicable**
Upper/lower flammability or explosive limits:	
Lower explosion limit:	**1,76 Vol-%**
Upper explosion limit:	**10,4 Vol-%** Source: n-butyl acetate
Vapour pressure at20 °C:	**3,4845 mbar**
Vapour density:	**not applicable**
Relative density:	
Density at20 °C:	**1,04 g/cm³**
Solubility(ies):	
Water solubility (g/L) at20 °C:	**insoluble**
Partition coefficient: n-octanol/water:	**see section 12**
Auto-ignition temperature:	**300 °C** Source: 2-butoxyethyl acetate
Decomposition temperature:	**not applicable**
Viscosity at20 °C:	**10 s 4 mm** Method: DIN 53211
Explosive properties:	**not applicable**
Oxidising properties:	**not applicable**

9.2. **Other information**

Solid content (%):	**54 Wt %**
solvent content:	
Organic solvents:	**46,20 Wt %**
Water:	**0,00 Wt %**
Solvent separation test (%):	**< 3 Wt % (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**
No information available.

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]
No data on preparation itself available.

11.1. **Information on toxicological effects**

Acute toxicity, calculated:

ATEmix calculated, oral: > 5000 mg/kg
ATEmix calculated, dermal: > 5000 mg/kg
ATEmix calculated, inhalative (vapours): > 20 mg/l

Acute toxicity

2-methoxy-1-methylethyl acetate
dermal, LD50, Rabbit: > 5000 mg/kg
inhalative (dust and mist), LC50, Rat: 35,7 mg/l (4 h)
inhalative (vapours), LC50:, Rat: > 23,5 mg/kg (6 h)

n-butyl acetate
oral, LD50, Rat: 14000 mg/kg
inhalative (vapours), LC50, Rat: > 21 mg/l (4 h)

1,6-Hexamethylene diisocyanate homopolymer
inhalative (vapours), LC50, Rat: (4 h)
Harmful if inhaled.

2-butoxyethyl acetate
oral, LD50, Rat:

skin corrosion/irritation; Serious eye damage/eye irritation

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

Respiratory or skin sensitisation

1,6-Hexamethylene diisocyanate homopolymer
Skin:
May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

Specific target organ toxicity

n-butyl acetate
Specific target organ toxicity (single exposure), drowsiness:
May cause drowsiness or dizziness.

1,6-Hexamethylene diisocyanate homopolymer
Specific target organ toxicity (single exposure), Irritation:
May cause respiratory irritation.

Practical experience/human evidence

Other observations:
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 .

SECTION 12: Ecological information

overall evaluation
Classification according to Regulation (EC) No 1272/2008 [CLP]
There is no information available on the preparation itself .
Do not allow to enter into surface water or drains.

12.1. **Toxicity**

2-methoxy-1-methylethyl acetate
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 134 mg/l (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 408 mg/l (48 h)
Fish toxicity, LC50:: 161 mg/l (96 h)

Long-term Ecotoxicity

2-methoxy-1-methylethyl acetate
Fish toxicity, NOEC, Oryzias latipes (Ricefish): 47,5 mg/l (14 d)
Daphnia toxicity, NOEC, Daphnia magna (Big water flea): > 100 mg/l (21 h)

12.2. **Persistence and degradability**
No information available.

12.3. **Bioaccumulative potential**

2-methoxy-1-methylethyl acetate
Partition coefficient: n-octanol/water: 1,2

Bioconcentration factor (BCF)

No information available.

12.4. **Mobility in soil**
No information 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
080111 Waste paint and varnish containing organic solvents or other dangerous substances

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

SECTION 14: Transport information

14.1. **UN number**

UN 1263

14.2. **UN proper shipping name**

Land transport (ADR/RID):	Paint related material
Sea transport (IMDG):	PAINT RELATED MATERIAL
Air transport (ICAO-TI / IATA-DGR):	Paint related material

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

3

14.4. **Packing group**

III

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	D/E

Sea transport (IMDG)

EmS-No.	F-E, S-E

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
VOC-value (in g/L): 477

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).

Other regulations, restrictions and prohibition regulations

15.2. **Chemical Safety Assessment**
For the following substances of this preparation a chemical safety assessment has been carried out:

EC No. CAS No.	Chemical name	REACH No.
500-060-2 28182-81-2	1,6-Hexamethylene diisocyanate homopolymer	01-2119485796-17
204-658-1 123-86-4	n-butyl acetate	01-2119485493-29
203-603-9 108-65-6	2-methoxy-1-methylethyl acetate	01-2119475791-29
203-933-3 112-07-2	2-butoxyethyl acetate	01-2119475112-47

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
STOT SE 3 / H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.
Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.

Abbreviations and acronyms

ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
AGW (WEL)	Occupational Exposure Limit Value
CAS	Chemicals Abstract Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DNEL	Derived No-Effect Level
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
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
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport international ferroviaire de marchandises Dangereuses (Regulations concerning the International Carriage of Dangerous Goods by Rail)
UN	United Nations
LC	Lethal Concentration
LD	Lethal Dose
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 chapter 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.