



SAFETY DATA SHEET
according Regulation EC No 1907/2006 and
Regulation EU No 453/2010

FIXING AGENT (AEROSOL)

Date of issue: 25.11.2004
Revision: 20.2.2014
Date of revision: 5

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

1.1. Product identifier

Product name: FIXING AGENT (AEROSOL)

Chemical name: -

Registration number: Not registered (mixture)

Code K2: V014259800000

Note: For the identification numbers of chemical substance or hazardous components of mixture see section 3.

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

Identified uses of the substance or mixture: Aerosol for fixing drawings formed by chalks, graphite, pastel with using a spray.

Uses advised against: All other uses different than recommended uses.

1.3. Details of the supplier of the safety data sheet

Supplier identification

Trade name: KOH-I-NOOR HARDTMUTH a.s.
Address: F. A. Gerstnera 21/3, 371 30 České Budějovice
Závod 1, 289 03 Městec Králové
Vat number: CZ 26055996
Phone number: +420 325 870 311/+420 325 643 241
E-mail: sales@koh-i-noor.cz

Responsible person for the safety data sheet

Name: Ing. Lukáš Trávníček
Trade name: EKONOX, s.r.o.
Address: V Ráji 501, 530 02 Pardubice
Phone number: +420 466 415 010
E-mail: info@ekonox.cz

1.4. Emergency telephone number

+420 602 414 051 or Toxicological information centre, Na Bojišti 1, 128 08 Prague 2,
non-stop telephone 224 919 293, 224 915 402, or (only during the day 224 914 575)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification of the substance or mixture according Directive 1272/2008/EC (CLP):

Danger property: Flam. Aerosol 1, Eye irrit. 2, STOT SE 3, Aquatic chronic 4

H-phrases: H222-229-319-336-413

For the wording of the listed H-statements refer to section 16.

2.1.2 Other information

The most important adverse physicochemical effects:

Extremely flammable aerosol. Pressurised container: May burst if heated.

The most important adverse for human health:

Inhalation: May cause drowsiness or dizziness.

Ingestion: not known

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Contact with skin: May cause irritation to sensitive person.
Contact with eyes: Causes serious eye irritation.
The most important adverse for the environment: May cause long lasting harmful effects to aquatic life.

2.2. Label elements

Labelling of the substance or mixture with classification according Directive 1272/2008/EC (CLP):

Hazard pictogram(s):



Signal word: Warning

H-statements:	H222 H229 H319 H336 H413	Extremely flammable aerosol. Pressurised container: May burst if heated. Causes serious eye irritation. May cause drowsiness or dizziness. May cause long lasting harmful effects to aquatic life.
P-statements:	P102 P210 P211 P251 P261 P264 P271 P273 P280 P304+340 P305+351+338 P312 P337+313 P403+233 P405 P410+412 P501	Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor/if you feel unwell. If eye irritation persists: Get medical advice/ attention. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F. Dispose of contents/container to dangerous waste.



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Labelling of the substance or mixture with classification according Directive 1272/2008/EC (CLP) – packaging smaller than 125 ml:

Hazard pictogram(s):



Signal word:

Warning

H-statements:

H222

Extremely flammable aerosol.

H229

Pressurised container: May burst if heated.

H336

May cause drowsiness or dizziness.

H413

May cause long lasting harmful effects to aquatic life.

P-statements:

P102

Keep out of reach of children.

P210

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P211

Do not spray on an open flame or other ignition source.

P251

Do not pierce or burn, even after use.

P261

Avoid breathing spray.

P271

Use only outdoors or in a well-ventilated area.

P304+340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312

Call a POISON CENTER/doctor/if you feel unwell.

P403+233

Store in a well-ventilated place. Keep container tightly closed.

P405

Store locked up.

P410+412

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501

Dispose of contents/container to dangerous waste.

Additional information on the packaging/label:

Contains: Ethanol, Dimethylethlether, Acetone

EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazard

For results of PBT and vPvB assessment see section 12.

SECTION 3. Composition/information on ingredients

3.1. Substance

Product is the mixture.

Product name:

Other identification data of substance:

1) Index number 2) CAS 3) ES 4) Registration number	Chemical name	Concentration [% weight]	Classification according 1272/2008/EC
-	-	-	-

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3.2. Mixtures

Product name: FIXING AGENT (AEROSOL)
Chemical characteristic: Mixture of ethanol, acetone, dimethyl ether and other additives.

Other identification data of substances:

1) Index number 2) CAS 3) ES 4) Registration number	Chemical name	Concentration [% weight]	Classification according 1272/2008/EC
1) 603-002-00-5 2) 64-17-5 3) 200-578-6 4) Not assigned	Ethanol	< 52	Flam. Liq. 2 (H225)
1) 603-019-008 2) 115-10-6 3) 204-065-8 4) 01-2119472128-37-XXXX	Dimethyl ether	< 30	Flam. Gas 1 (H220), Press. Gas. (H280)
1) 606-001-00-8 2) 67-64-1 3) 200-662-2 4) Not assigned	Acetone	21	Flam. Liq. 2 (H225), Eye Irrit. 2 (H319), STOT SE 3 (H336)
1) 606-001-00-8 2) 127519-17-9 3) 407-000-3 4) 01-0000015648-61-XXXX	reaction mass of branched and linear C7-C9 alkyl 3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]propionates	1,7	Aquatic chronic 2 (H411)
1) Not assigned 2) 129757-67-1 3) 406-750-9 4) 01-0000015625-69-XXXX	Bis(2,2,6,6-tetramethyl-4-piperidiny) decanedioate reaction products with 1,1-dimethyl ethyl hydroperoxide and octane	1,7	Aquatic chronic 4 (H413)

For the wording of the listed H-statements refer to section 16.

SECTION 4. First aid measures

4.1. Description of first aid measures

General information:

Symptomatic treatment. In case of health problems consult a doctor. When an accident and sickness occurs, get medical attention and show this safety data sheet. When providing first aid, must not to be affected person grow cold.

Inhalation:

Remove person from contaminated area to fresh air and make sure, that breathes. If the breathing becomes difficult, secure him oxygen supply. In case of non-standard expressions seek physician.

Skin contact:

Take off contaminated clothing. Wash with plenty of soap and water, treat with protective cream. In case of non-standard expressions seek physician.

Contact with eyes:



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Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing minimally 15 minutes. Seek physician immediately.

Ingestion:

If the victim is conscious, let to drink him plenty of water. Do not provoke vomiting! Seek physician immediately.

Other data:

Other information concerning the delivery of first aid measures, especially in serious cases of health damage, the attending physician can consult the procedure with Toxikologické informační středisko, Praha, Czech Republic, **phone (continually):** +420 224 919 293, 224 915 402, fax 224 914 570.

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

Danger to eyes:

Causes serious eye irritation.

Risk of skin contact:

May cause irritation to sensitive person.

Risk of ingestion:

Not known

Risk of inhalation:

May cause drowsiness or dizziness.

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

See section 4.1

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Alcohol-resistant foam, dry chemical powder, carbon dioxide, water spray jet

Unsuitable extinguishing media:

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire will release carbon oxides and harmful gases with contents organic derivatives.

Do not expose to temperatures exceeding 50 °C/122 °F.

Pressurised container: May burst if heated.

5.3. Advice for firefighters

Use protective clothing and self-breathing apparatus.

5.4. Other information

Containers threatened to fire bring to safety.

Containers exposed to fire cool with water spray.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Wear protective gloves/protective clothing/eye protection/face protection. Prevent entry unauthorized persons. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid breathing spray. Use only outdoors or in a well-ventilated area.

For emergency responders:



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Use suitable personal protective equipment to avoid contact with product.

6.2. Environmental precaution

Prevent spreading of spilled preparation into drains/surface water/ground water. In case of release of the mixture into water or drains, inform competent authorities.

6.3. Methods and material for containment and cleaning up

Methods of containment of leakage:

After using the product, secure packaging against press of release mechanism.

Methods for cleaning up:

Allow to evaporate propellant gas. Liquid phase remove from the contaminated area with suitable non-flammable sorbent (sand, earth, vermiculite). Used sorbent then store in container labelled as waste.

Disposal see section 13.

Other information:

Are not to disposition

6.4. Reference to other section

See Section 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Do not smoke, drink and eat. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing spray. Use only outdoors or in a well-ventilated area. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

7.2. Conditions for safe storage, including any incompatibilities

Store in a tightly closed labelled container, protect them from damage. Store in original containers or in containers provided for this purpose. Store in cool, dry place. Store in a well-ventilated place. Keep away from heat/sparks/open flames/hot surfaces. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Materials unsuitable for containers: Viton ®, rubber product.

Incompatible materials: Alkali metals, ammonia, oxidizing agents, peroxides, strong reducing agents, halogenated compounds, ethanolamine, hydrofluoride.

7.3. Specific end use(s)

See section 1.2.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

The mixture includes substances for which the following occupational concentration limits are set (NV361/2007 Coll., as amended) (maximum permissible exposure limit = PEL; maximum permissible concentration = MPC).

Dangerous substances	CAS no.	PEL	NPK-P
		mg.m ⁻³	
Ethanol	64-17-5	1000	3000
Acetone*	67-64-1	800	1500



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Dimethyl ether	115-10-6	1000	2000
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Note: I* – irritating to mucous membranes (eyes, respiratory system) or the skin.

8.2. Exposure control

Appropriate engineering controls:

Provide good ventilation of working area (local exhaust ventilation, if necessary). Do not smoke, drink and eat. After the work is always thoroughly wash and treat with a suitable skin cream.

Individual protection measures, such as personal protective equipment:

Eye/face protection:

Tightly fitting safety glasses

Skin protection:

Suitable protective gloves, resistant to solvents.

The gloves material has to be impermeable and resistant to the product.

Protective clothing, footwear.

Respiratory protection:

In case of good ventilation is not required. Otherwise, use an appropriate respiratory protection (respirator or mask).

Thermal hazard: Not known.

Environmental exposure controls: Prevent contamination of water or drains.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	aerosol
Odour:	light yellow
Odour threshold:	alcohol
pH:	not determined
Melting point/ freezing point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	<-10 oC (ČSN 65 6065)
Evaporation rate:	not determined
Flammability (solid, gas):	Extremely flammable aerosol.
Upper/lower flammability or explosive limits:	not determined
Vapour pressure:	not determined
Vapour density:	not determined
Relative density:	not determined
Solubility:	not determined
Partition coefficient: n-octanol/water:	miscible in water
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
Viscosity:	not determined
Explosive properties:	not determined
Oxidising properties:	not determined

9.2. Other information

Data are not available.

SECTION 10. Stability and reactivity

10.1. Reactivity

Product is not reactive under normal conditions of use.

10.2. Chemical stability



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Product is chemical stable under normal conditions of use.

10.3. Possibility of hazardous reactions

None hazardous reactions known under normal conditions of use.

10.4. Conditions to avoid

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from heat/sparks/open flames/hot surfaces.

10.5. Incompatibles materials

Alkali metals, ammonia, oxidizing agents, peroxides, strong reducing agents, halogenated compounds, ethanolamine, hydrofluoride.

10.6. Hazardous decomposition products

Fire will release carbon oxides and harmful gases with contents organic derivatives.
Pressurised container: May burst if heated.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

Data are not available.

Acute toxicity determined for:

Ethanol:

LD₅₀(Rat, oral): 10 470 mg/kg bw (95 % ETOH)

LC₅₀(Rat, inhalation): 124,7 mg/l/4 hours

LD₅₀(Rabbit, dermal): >20 000 ml/kg bw

Acetone:

LD₅₀(Rat, oral): 5 800 mg/kg bw

LC₅₀(Rat, inhalation): 76 mg/l/4 hours

LD₅₀(Rabbit, dermal): 20 000 mg/kg bw

Skin corrosion/irritation:

Data are not available.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitisation:

Data are not available.

Germ cell mutagenicity:

Data are not available.

Carcinogenicity:

Data are not available.

Reproductive toxicity:

Data are not available.

STOT-single exposure:

May cause drowsiness or dizziness.

STOT-repeated exposure:

Data are not available.

Aspiration hazard:

Data are not available.

Information on likely routes of exposure:

Not determined

Symptoms related to the physical, chemical and toxicological characteristics:

Not known.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Not known.

SECTION 12. Ecological information

12.1. Toxicity

May cause long lasting harmful effects to aquatic life.

Acute toxicity determined for:



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Ethanol:

LC ₅₀ (Pimephales promelas):	14,2 g/l/96 hours
LC ₅₀ (Daphnia magna):	> 100 mg/l/96 hours
LC ₅₀ (Nostoc species):	> 22,6 g/l/10 days
LC ₅₀ (Daphnia magna):	12 600 mg/l/48 hours
LC ₅₀ (Oncorhynchus mykiss):	5 540 mg/l/96 hours
LC ₅₀ (Poecilia reticulata):	> 4,1 mg/l/96 hours
EC ₅₀ (Daphnia magna):	> 4,4 mg/l/48 hours
EC ₅₀ (Algae):	154,9 g/l/96 hours

Acetone:

Dimethyl ether:

12.2. Persistence and degradability

Data are not available.

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water (log Kow): -
Bioconcentration factor (BCF): -

12.4. Mobility in soil

Data are not available.

12.5. Results of PBT and vPvB assessment

Assessment was not carried out.

12.6. Other adverse effects

Not known.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Substance treatment methods:

Product has to be disposed as dangerous waste. Product has to be disposed in accordance with law of wastes in valid version and with connecting on legal directives.

Contaminated container treatment methods:

Contaminated container has to be disposed as dangerous waste. Contaminated container has to be disposed in accordance with law of wastes in valid version and with connecting on legal directives.

Other information:

Waste labelling must correspond with European catalogue of waste.

SECTION 14. Transport information

14.1. UN number

1950

Labelling:



14.2. UN proper shipping name

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AEROSOL, FLAMMABLE

14.3. Transport hazard class(es)

2 (5F) Gases

14.4. Packing group

Not for aerosol

14.5. Environmental hazards

May cause long lasting harmful effects to aquatic life.

14.6. Special precautions for user

Not determined

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not determined

SECTION 15. Regulatory information

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

REGULATION (EC) No 1907/2006 of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

REGULATION (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

CZECH NATIONAL LEGISLATION (Safety, health and environmental regulations):

Act no. 350/2011 Coll., on chemical substances and chemical preparations

Decree No. 402/2011 on the assessment of the hazardous properties of chemical substances and mixtures, and packaging and labelling of dangerous chemical compounds

Reduction of P-statements referred to on the label of the products were made in accordance with section 7 of the Guidelines for labeling and packaging, issued by the European Chemicals Agency 04/2011.

15.2. Chemical safety assessment

It has been not done.

SECTION 16. Other information

List of relevant H-statements (Sections 2. and 3.):

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.

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- H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.
 H413 May cause long lasting harmful effects to aquatic life.

Advices for training:

Acquaint the workers with this Safety Data Sheet and with general rules of handling with chemical substances/ mixtures. Training carry out once time per year.

The details in this safety data sheet are based on our status of knowledge and experience at the time of date issue. They are not a contractual assurance of quality properties of the product, and they apply only in conjunction with correct and proper handling of the product under normal conditions, and according to the details of specified use on the packing and/or in the technical instructions. The user himself is fully responsible for every other use of the product such as in combination with other products or with other processes.

Wellspring of information for elaboration of Safety Data Sheet:

Safety Data Sheets of raw materials
 MSDS FIXATIV (AEROSOL), 20.2.2014, supplier KOH-I-NOOR HARDTMUTH a.s.
 Database of registered substances ECHA (www.echa.eu), 20.2.2014
 Regulatory information (see 15.1)

Revision number 5 occurred to changes in all section of this Material Safety Data Sheet.

Abbreviations:

UVCB	Unknown or variable composition
PBT	Persistent, bioaccumulative and toxic
vPvB	Very persistent and very bioaccumulative
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
CSR	Chemical Safety Report
ECHA	European Chemical Agency
PEL	Permissible exposure limit
NPK-P	Maximum available concentration
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service
EINECS	Existing Commercial Chemical Substance
DNEL	Derived No Effect Level
PNEC	Predict No-Effect Concentration
STOT	Specific target organ toxicity