

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

1 Identification of substance

· **Product details**

- **Trade name:** *D-520S*
- **Manufacturer/Supplier:** *EFTEC AG Hofstrasse 31 CH-8590 Romanshorn, Switzerland*
- **Information department:** *+41(0)71 466 43 00 Customer Support Laboratory*
- **Emergency information:** *+41(0)1 251 51 51 Swiss Toxicological Information Centre*

2 Composition/Data on components

- **Chemical characterization**
- **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**

64-17-5	ethanol	50-100%
4420-74-0	3-trimethoxysilylpropane-1-thiol	£ 2.5%
919-30-2	3-aminopropyltriethoxysilane	£ 2.5%

3 Hazards identification

- **Hazard description:**
Highly flammable
- **Canadian Hazard Symbols**



- **Information pertaining to particular dangers for man and environment:**

Highly flammable.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 3
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)



Health = 3

Fire = 3

Reactivity = 0

4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:**
Water
Water with full jet
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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· Class according to regulation on flammable liquids: A 1

8 Exposure controls and personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Components with limit values that require monitoring at the workplace:

64-17-5 ethanol

PEL 1900 mg/m³, 1000 ppmREL 1900 mg/m³, 1000 ppmTLV 1880 mg/m³, 1000 ppm

· Additional information: The lists that were valid during the creation were used as basis.

· Personal protective equipment:

· General protective and hygienic measures: Wash hands before breaks and at the end of work.

· Breathing equipment: Not required.

· Protection of hands: Not required.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Form: Liquid
 · Color: Clear
 · Odor: Alcohol-like

· Change in condition

Melting point/Melting range: -114.5°C (-174°F)

Boiling point/Boiling range: 78°C (172°F)

· Flash point: 13°C (55°F)

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower: 3.5 Vol %

Upper: 15 Vol %

· Vapor pressure at 20°C (68°F): 59 hPa

· Density at 20°C (68°F): 0.79 g/cm³

· Solubility in / Miscibility with

Water at 20°C (68°F): 1.000 g/l

· Solvent content:

Organic solvents: 23.1 %

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· **Solids content:** 76.9 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**



- **Hazard class:** 3
- **Identification number:** UN1170
- **Packing group:** II
- **Proper shipping name (technical name):** Ethanol solution (Ethyl alcohol solution)

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· **Label** 3· **Land transport ADR/RID (cross-border):**

· **ADR/RID class:** 3 Flammable liquids
 · **Item:** 3b
 · **Danger code (Kemler):** 33
 · **UN-Number:** 1170
 · **Description of goods:** 1170 Ethanol solution (Ethyl alcohol solution)

· **Maritime transport IMDG:**

· **IMDG Class:** 3.2
 · **Page:** 3268
 · **UN Number:** 1170
 · **Label** 3
 · **Packaging group:** II
 · **EMS Number:** 3-05
 · **MFAG:** 310,313
 · **Marine pollutant:** No
 · **Propper shipping name:** Ethanol solution (Ethyl alcohol solution)

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1170
 · **Label** 3
 · **Packaging group:** II
 · **Propper shipping name:** Ethanol solution (Ethyl alcohol solution)

15 Regulations

· **Sara**· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

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· Proposition 65**· Chemicals known to cause cancer:**

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

· Cancerogenity categories**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol A4

· MAK (German Maximum Workplace Concentration)

64-17-5 ethanol 5

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

· Hazard symbols:

Highly flammable

· Risk phrases:

Highly flammable.

· Safety phrases:

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

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

This material and its container must be disposed of as hazardous waste.

· National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· Classification according to VbF: A I

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· Technical instructions (air):

Class	Share in %
III	50-100

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing MSDS: Customer Support Laboratory**· Contact: H. Perler**

USA