

## 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-528S*
- **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:**

78-93-3	<i>butanone</i>	<i>50-100%</i>
108-65-6	<i>2-methoxy-1-methylethyl acetate</i>	<i>2.5-10%</i>
141-78-6	<i>ethyl acetate</i>	<i>2.5-10%</i>
9016-87-9	<i>diphenylmethanediisocyanate, isomeres and homologues</i>	<i>2.5-10%</i>
28182-81-2	<i>Aliphatisches Polyisocyanat</i>	<i>2.5-10%</i>
2530-83-8	<i>[3-(2,3-epoxypropoxy)propyl]trimethoxysilane</i>	<i>£ 2.5%</i>

### 3 Hazards identification

· **Hazard description:**

- Harmful*
- Highly flammable*
- **Canadian Hazard Symbols**



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

- Highly flammable.*
- Irritating to eyes.*
- May cause sensitization by inhalation and skin contact.*
- Contains isocyanates. See information supplied by the manufacturer.*

· **Classification system:**

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

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

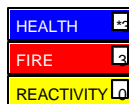
Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 1)

· **NFPA ratings (scale 0 - 4)**

Health = 3  
Fire = 3  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = \*3  
Fire = 3  
Reactivity = 0

## 4 First aid measures

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

## 5 Fire fighting measures

· **Suitable extinguishing agents:** CO<sub>2</sub>, 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).

Dispose contaminated material as waste according to item 13.

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.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 2)

· **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.

· **Class according to regulation on flammable liquids:** A I

## 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:**

**78-93-3 butanone**

PEL	590 mg/m <sup>3</sup> , 200 ppm
REL	Short-term value: 885 mg/m <sup>3</sup> , 300 ppm Long-term value: 590 mg/m <sup>3</sup> , 200 ppm
TLV	Short-term value: 885 mg/m <sup>3</sup> , 300 ppm Long-term value: 590 mg/m <sup>3</sup> , 200 ppm
BEI	

**1333-86-4 Carbon black**

PEL	3.5 mg/m <sup>3</sup>
REL	3.5* mg/m <sup>3</sup> *0.1 in presence of PAHs
TLV	3.5 mg/m <sup>3</sup>

**141-78-6 ethyl acetate**

PEL	1400 mg/m <sup>3</sup> , 400 ppm
REL	1400 mg/m <sup>3</sup> , 400 ppm
TLV	1440 mg/m <sup>3</sup> , 400 ppm

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

TLV	(as inhalable aerosols)
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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 3)

· **Protection of hands:**

Protective gloves

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

- |                 |                |
|-----------------|----------------|
| · <b>Form:</b>  | Liquid         |
| · <b>Color:</b> | Black          |
| · <b>Odor:</b>  | Characteristic |

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 79°C (174°F)

- |                       |             |
|-----------------------|-------------|
| · <b>Flash point:</b> | -4°C (25°F) |
|-----------------------|-------------|

- |                                |               |
|--------------------------------|---------------|
| · <b>Ignition temperature:</b> | 315°C (599°F) |
|--------------------------------|---------------|

- |                         |                              |
|-------------------------|------------------------------|
| · <b>Auto igniting:</b> | Product is not selfigniting. |
|-------------------------|------------------------------|

- |                               |  |
|-------------------------------|--|
| · <b>Danger of explosion:</b> | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
|-------------------------------|--|

· **Explosion limits:**

Lower: 1.8 Vol %

Upper: 11.5 Vol %

- |   |         |
|---|---------|
| · <b>Vapor pressure at 20°C (68°F):</b> | 105 hPa |
|---|---------|

- |                   |                 |
|-------------------|-----------------|
| · <b>Density:</b> | Not determined. |
|-------------------|-----------------|

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

· **Solvent content:**

Organic solvents: 79.7 %

## 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.

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 4)

## 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful.  
Irritant.

## 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:** UN1866
- **Packing group:** II
- **Proper shipping name (technical name):** Resin solution
- **Label:** 3

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 5)

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



· ADR/RID class:	3 Flammable liquids
· Item:	5b
· Danger code (Kemler):	33
· UN-Number:	1866
· Description of goods:	1866 Resin solution

· Maritime transport IMDG:



· IMDG Class:	3.2
· Page:	3230
· UN Number:	1866
· Label	3
· Packaging group:	II
· EMS Number:	<u>3-07</u>
· MFAG:	310
· Marine pollutant:	No
· Proper shipping name:	Resin solution

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class:	3
· UN/ID Number:	1866
· Label	3
· Packaging group:	II
· Proper shipping name:	Resin solution

## 15 Regulations

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

78-93-3	butanone
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
1330-20-7	xylene (mix)

· TSCA (Toxic Substances Control Act):

78-93-3	butanone
1333-86-4	Carbon black
108-65-6	2-methoxy-1-methylethyl acetate

(Contd. on page 7)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 6)

141-78-6	ethyl acetate
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
123-86-4	n-butyl acetate
1330-20-7	xylene (mix)
77-58-7	dibutyltin dilaurate

· **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.

· **Carcinogenity categories**

· **EPA (Environmental Protection Agency)**

78-93-3	butanone	D
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	D; CBD
1330-20-7	xylene (mix)	D

· **IARC (International Agency for Research on Cancer)**

1333-86-4	Carbon black	2B
1330-20-7	xylene (mix)	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

1333-86-4	Carbon black	A4
1330-20-7	xylene (mix)	A4
77-58-7	dibutyltin dilaurate	A4

· **MAK (German Maximum Workplace Concentration)**

1333-86-4	Carbon black	3
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3

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

1333-86-4	Carbon black	
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· **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:**



Harmful  
Highly flammable

· **Hazard-determining components of labelling:**

Aliphatisches Polyisocyanat

(Contd. on page 8)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 05/21/2002

Reviewed on 05/13/2002

Trade name: D-528S

(Contd. of page 7)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane  
diphenylmethanediisocyanate, isomers and homologues

· **Risk phrases:**

Highly flammable.  
Irritating to eyes.  
May cause sensitization by inhalation and skin contact.

· **Safety phrases:**

Keep container in a well-ventilated place.  
Do not breathe gas/fumes/vapour/spray.  
Avoid contact with skin and eyes.  
Wear suitable gloves.  
In case of accident or if you feel unwell, seek medical advice immediately.  
This material and its container must be disposed of as hazardous waste.

· **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

· **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**

· **Technical instructions (air):**

Class	Share in %
I	2,5-10
II	£ 2,5
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