

### SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

## **RAYCHEM S1005 ADHESIVE, PART A**

### Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: Epoxy resin

CAS no. 25068-38-6 Reference : RAY/3001AE Revision 3

EC index No. 603-074-00-8 NFPA code : N.D. : <700 EINECS No. N.A. Molecular weight RTECS No. : SL6321000 Formula

1.2 Use of the substance or the preparation:

1.3 Company/undertaking identification:

TYCO Electronics Cheney Manor Industrial Estate SN2 2QE Swindon, United Kingdom Tel.: +44 1793 57 38 24 Fax: +44 1793 57 39 53

Telephone number for emergency: +32 14 58 45 45 Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.) Technische Schoolstraat 43A, B-2440 Geel

### Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in	Hazard symbol	Risks (R-phrases)
reaction product: bisphenol A- (epichlorhydrin); epoxy resin (number average molecular weight<=700)	25068-38-6 -	100	Xi;N	36/38-43-51/53 (1)

(1) For R-phrases in full: see heading 16

### Hazards identification

- Irritating to eyes and skin
- May cause sensitization by skin contact
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### First aid measures

Eye contact:

- Hold eyelids apart and flush eyes with clean water for 15 minutes
- Consult a doctor/medical service

4.2 Skin contact:

Remove contaminated clothing and launder before reuse
Wash skin immediately with mild soap and water
Consult a doctor/medical service if irritation persists

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Compiled by Brandweerinformatiecentrum voor Gevaarlijke Stoffen vzw (BIG)

Technische Schoolstraat 43 A, B-2440 Geel

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: 13-09-2002 : 003 MSDS established : 26-07-1999 Revision date Reference number : BIG\28647GB Revision number

Reason for revision : Directive 2001/58/EC

#### 4.3 After inhalation:

- Remove the victim into fresh air

- Keep warm and at rest Trained personnel may administer oxygen if necessary Consult a doctor/medical service if breathing problems develop

#### 4.4 After ingestion:

- Never give anything by mouth to an unconscious person If conscious rinse mouth with water and give 250ml of water to drink
- Do not induce vomiting
- Consult a doctor/medical service

### Fire-fighting measures

#### 5.1 Suitable extinguishing media:

- Water spray
- Polyvalent foam
- BC powder
- Carbon dioxide

#### 5.2 Unsuitable extinguishing media:

- Solid water jet ineffective as extinguishing medium

#### 5.3 Special exposure hazards:

- Not easily combustible
  Hazardous decomposition products may be evolved in a fire (see section 10.3)
  Avoid run-off water entering drains (e.g. use barriers)

#### 5.4 Instructions:

- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

#### 5.5 Special protective equipment for firefighters:

- Self-contained breathing apparatus with full face piece
- Protective clothing for exposure to chemicals

### Accidental release measures

#### **6.1** Personal protection/precautions: see heading 8.1/8.3/10.3

#### 6.2 Environmental precautions:

- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Contain leaking substance, pump over in suitable containers Plug the leak, cut off the supply
- Dam up the liquid spill

#### 6.3 Methods for cleaning up:

- Take up liquid spill into inert absorbent material
- Scoop absorbed substance into closing containers Carefully collect the spill/leftovers
- Clean contaminated surfaces with a soap solution
- Wash clothing and equipment after handling

### Handling and storage

#### 7.1 Handling:

- Handling:

   Observe very strict hygiene avoid contact

   Avoid contact with skin and eyes

   Avoid inhaling vapours/fumes which may be released during use

   Avoid inhaling dust when grinding/sanding/cutting cured material

   Do not eat, drink or smoke in the work area

   Wash hands after handling material

- Do not discharge the waste into the drain
- Remove contaminated clothing immediately
- Clean contaminated clothing

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#### 7.2 Storage:

- Keep container tightly closed Store in a cool area
- Store in a dry area
- Store in a well-ventilated area
- Keep away from: heat sources, oxidizing agents, acids, amines

: 23 ٥C Storage temperature : N.D. Quantity limits kg Storage life 365 days

Materials for packaging

- suitable :no data available

- to avoid :no data available

#### 7.3 Specific uses:

- Refer to Tyco Electronics product installation instructions - The curing process is exothermic (releases heat)

: not listed : not listed

### **Exposure controls/Personal protection**

#### 8.1 Exposure limit values:

: not listed
: not listed TLV-TWA TLV-STEL TLV-Ceiling : not listed OES-LTEL : not listed : not listed OES-STEL : not listed MEL-LTEL MEL-STEL : not listed : not listed MAK TRK : not listed MAC-TGG 8 h : not listed

MAC-TGG 15 min. : not listed MAC-Ceiling : not listed

: not listed
: not listed GWBB-8 h GWK-15 min. : not listed Momentary value

: not listed
: not listed EC-STEL

#### Sampling methods:

- No data available

#### 8.2 Exposure controls:

VME-8 h

VLE-15 min.

#### 8.2.1 Occupational exposure controls:

- Use general and/or local exhaust ventilation of the workplace
- Curing ovens must be exhausted to outdoors or to suitable emission control device
- Use local exhaust ventilation when grinding/sanding/cutting cured material

#### 8.2.2 Environmental exposure controls: see heading 13

#### 8.3 Personal protection:

### 8.3.1 respiratory protection:

- Not required for normal conditions of use
- If ventilation is inadequate to control exposure during use, a suitable respirator or air-supplied equipment should be worn

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#### 8.3.2 hand protection:

- Impervious gloves Suitable materials:

Butyl rubber Nitrile rubber

- Breakthrough time:

#### 8.3.3 eye protection:

- Safety glasses with side shields or goggles

#### 8.3.4 skin protection:

- Protective clothing Suitable materials:

Butyl rubber Nitrile rubber

### Physical and chemical properties

#### 9.1 General information:

Appearance (at 20°C) : Liquid Odour Odourless

Colour : Colourless to light yellow

#### 9.2 Important health, safety and environmental information:

pH value Boiling point/boiling range **:** > 200 ٥C : 245 : N.D. Flashpoint ٥C Explosion limits vol% ( °C) Vapour pressure (at 20°C) Vapour pressure (at 50°C) Relative density (at 20°C) : < 0.0004 hPa : N.D. hPa : 1.17 Water solubility Insoluble Soluble in : N.D. : N.D. Relative vapour density Viscosity 9-13 Pa.s Partition coefficient n-octanol/water Evaporation rate ratio to butyl acetate : N.D. ratio to ether : N.D. Decomposition temperature ٥C

#### 9.3 Other information:

Melting point/melting range : N.D. ٥C Auto-ignition point : > 400 ٥C : N.D.  $g/m^3$ Saturation concentration

### Stability and reactivity

### 10.1 Conditions to avoid/reactivity:

Stable under normal conditions

### 10.2 Materials to avoid:

· Keep away from: heat sources, oxidizing agents, acids, amines

10.3 Hazardous decomposition products:

May react exothermically with amines and mercaptans
Thermal decomposition and combustion products may include, but are not limited to carbon monoxide, carbon dioxide and harmful gases/vapours

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### **Toxicological information**

#### 11.1 Acute toxicity:

```
LD50 oral rat
LD50 dermal rat
LD50 dermal rabbit
LC50 inhalation rat
LC50 inhalation rat
                                                        : > 5000
: N.D.
: N.D.
: N.D.
: N.D.
                                                                                                                  mg/kg
                                                                                                                  mg/kg
                                                                                                                  mg/kg
mg/l/4 h
                                                                                                                  ppm/4 h
```

#### 11.2 Chronic toxicity:

```
: not listed
: not listed
EC carc. cat.
EC muta. cat.
EC repr. cat.
                                        : not listed
Carcinogenicity (TLV) : not listed Carcinogenicity (MAC) : not listed Carcinogenicity (VME) : not listed Carcinogenicity (GWBB) : not listed
Carcinogenicity (MAK)
Mutagenicity (MAK)
                                        : not listed
                                        : not listed
: not listed
Teratogenicity (MAK)
IARC classification
                                        : not listed
```

11.3 Routes of exposure: Skin and eye contact and if swallowed

Inhalation of thermal decomposition products

#### 11.4 Acute effects/symptoms:

- AFTER INHALATION
- Not a normal route of exposure
- Vapours evolved during heat curing processes, and dust formed when grinding/sanding/cutting cured material, can cause irritation of the respiratory tract
- Symptoms may include sore nose and throat, coughing, sneezing and breathing difficulties
- AFTER INGESTION
   Not expected to cause adverse health effects if small amounts are swallowed incidental to normal handling
  May cause irritation of the gastric/intestinal mucosa
- Symptoms may include pain, nausea, vomiting, abdominal tenderness and blood in vomit/faeces
- AFTER EYE CONTACT
- Symptoms may include pain, lacrimation, redness of the eye tissue, swelling and blurred vision
- AFTER SKIN CONTACT
- Prolonged or repeated exposure may cause skin irritation and dermatitis
   Symptoms may include redness, swelling and itching

#### 11.5 Chronic effects:

- May cause sensitization by skin contact If skin sensitization has developed and a causal relationship has been established, further exposure should not be allowed
- ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
- Skin rash/inflammation

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### 12. Ecological information

#### 12.1 Ecotoxicity:

- 1.5/7.7 mg/l (SALMO GAIRDNERI/ONCORHYNCHUS MYKISS) 1.1/3.6 mg/l (DAPHNIA MAGNA) 220 mg/l (CHLOROPHYTA)

#### 12.2 Mobility:

- Volatile organic compounds (VOC): N.D.%
- Insoluble in water

For other physicochemical properties see heading 9.

#### 12.3 Persistence and degradability:

- biodegradation BODs % ThOD
- water - Not readily biodegradable in water :
- test: 12%, OECD 301B
- soil : T ½: N.D. days

#### 12.4 Bioaccumulative potential:

- log P<sub>ow</sub>BCF : > 3 : N.D.
- Bioaccumulative

#### 12.5 Other adverse effects:

- WGK (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)
  - of 17 May 1999)
- Effect on the ozone layer
- : Not dangerous for the ozone layer (Council Regulation (EC) No
- 3093/94, O.J. L333 of 22/12/94) : no data available - Greenhouse effect
- Effect on waste water purification : Sludge digestion is inhibited at
  - > 100 mg/l, 50%, 3h

### **Disposal considerations**

- 13.1 Provisions relating to waste:
   Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 09 (waste adhesives and sealants containing organic solvents or other dangerous substances)
  - Waste material code (Flanders): 512, 559 Hazardous waste (91/689/EEC)

  - Not classified as hazardous waste when mixed with S1005 Part B and fully cured

#### 13.2 Disposal methods:

- Recycle/reuse
- Landfill or incinerate at a licensed site in accordance with national and local regulations
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into drains or the environment

### 13.3 Packaging/Container:

Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

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### 14. Transport information

90 3082

```
14.1 Classification of the substance in compliance with UN Recommendations
      UN number
                                                            : 3082
      CLASS
                                                            : 9
      SUB RISKS
      PACKING
                                                            : III
      PROPER SHIPPING NAME
                                                            : UN 3082, Environmentally
                                                              hazardous substance, liquid,
                                                              n.o.s. (reaction product:
                                                              bisphenol A-(epichlorhydrin);
epoxy resin (number average
                                                               molecular weight <= 700))
14.2 ADR (transport by road)
      CLASS
      PACKING
                                                            : III
      DANGER LABEL TANKS
                                                            :
                                                               9
      DANGER LABEL PACKAGES
                                                              9
                                                            :
14.3 RID (transport by rail)
                                                            : 9
      CLASS
      PACKING
                                                              III
      DANGER LABEL TANKS
                                                            : 9
      DANGER LABEL PACKAGES
                                                            : 9
14.4 ADNR (transport by inland waterways)
      CLASS
      PACKING
                                                            : III
      DANGER LABEL TANKS
                                                              9
                                                            :
                                                              9
      DANGER LABEL PACKAGES
                                                            :
14.5 IMDG (maritime transport)
      CLASS
                                                            : 9
      SUB RISKS
                                                            :
      PACKING
                                                            : III
      MFAG
                                                            :
      EMS
                                                            :
      MARINE POLLUTANT
                                                            : P
14.6 ICAO (air transport)
      CLASS
                                                            : 9
      SUB RISKS
      PACKING
                                                            : III
      PACKING INSTRUCTIONS PASSENGER AIRCRAFT PACKING INSTRUCTIONS CARGO AIRCRAFT
                                                            : 914/Y914
                                                            : 914
14.7 Special precautions in connection with
                                                            : none
      transport
14.8 Limited quantities (LQ)
      When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, only the following prescriptions shall be
      each package shall display a diamond-shaped figure with the following
      inscription:
      - 'UN 3082'
      or, in the case of different goods with different identification numbers within a single package: – the letters \text{'LQ'}
```

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### **Regulatory information**

Enumerated in substance list Annex I of directive 67/548/EEC and extended with additional risk phrases





Irritant

Dangerous for the environment

R36/38 : Irritating to eyes and skin

: May cause sensitization by skin contact

R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects

in the aquatic environment

: After contact with skin, wash immediately with plenty of water S28

and soap

S37/39 : Wear suitable gloves and eye/face protection

: Avoid release to the environment. Refer to special

instructions/safety data sheets.

#### 16. Other information

Users are advised that they may have additional disclosure obligations under other national and local laws. Users are advised to ensure that this information is brought to the attention of all employees, agents, and contractors handling this product. Users of Tyco Electronics products should make their own evaluation to determine the suitability of each such product for the specific application and to establish safe handling and installation procedures. Distributors of this product are advised to forward this document, or the information contained herein, to every purchaser of this product.

Tyco Electronics makes no warranties as to the accuracy or completeness of this information and disclaims any liability in connection with its use. Tyco Electronics obligations shall be only as set forth in Tyco Electronics standard terms and conditions of sale for this product. In no case will Tyco Electronics be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of this product.

N.A. = NOT APPLICABLE = NOT DETERMINED

= INTERNAL CLASSIFICATION

#### Full text of any R-phrases referred to under heading 2:

R36/38 Irritating to eyes and skin

May cause sensitization by skin contact R43

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the

aquatic environment

### Exposure limits:

VLE

Threshold Limit Value - ACGIH USA 2002

Occupational Exposure Standards - United Kingdom 1999

Maximum Exposure Limits - United Kingdom 1999 MEL Maximale Arbeitsplatzkonzentrationen - Germany 2001 MAK

TRK

Technische Richtkonzentrationen - Germany 2001 Maximale aanvaarde concentratie - The Netherlands 2002 MAC VME Valeurs limites de Moyenne d'Exposition - France 1999

Valeurs limites d'Exposition à court terme - France 1999 Grenswaarde beroepsmatige blootstelling - Belgium 2002 Grenswaarde kortstondige blootstelling - Belgium 2002 Indicative occupational exposure limit values - directive 2000/39/EC GWBB: GWK

EC

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# tyco **Electronics**

### SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

### **RAYCHEM S1005 ADHESIVE, PART B**

### Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: Aminopolyamide resin

CAS no. EC index No. : N.A. Reference : RAY/3001BE Revision 3

N.A. : N.D. : N.A. NFPA code EINECS No. Molecular weight RTECS No. Formula

1.2 Use of the substance or the preparation:

1.3 Company/undertaking identification:

TYCO Electronics Cheney Manor Industrial Estate SN2 2QE Swindon, United Kingdom Tel.: +44 1793 57 38 24 Fax: +44 1793 57 39 53

1.4 Telephone number for emergency:
+32 14 58 45 45
Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)
Technische Schoolstraat 43A, B-2440 Geel

### Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in	Hazard symbol	Risks (R-phrases)
polyaminoamide	68410-23-1	> 90	Хi	41 (1)
triethylenetetramine	112-24-3	<10	С	21-34-43-52/53 (1)
	203-950-6			

(1) For R-phrases in full: see heading 16

#### Hazards identification

- Irritating to skinRisk of serious damage to eyes
- May cause sensitization by skin contact

#### First aid measures

4.1 Eye contact:

- Hold eyelids apart and flush eyes with clean water for 15 minutes
- Consult a doctor/medical service

4.2 Skin contact:

- Remove contaminated clothing and launder before reuse Wash skin immediately with mild soap and water Consult a doctor/medical service if irritation persists

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Compiled by Brandweerinformatiecentrum voor Gevaarlijke Stoffen vzw (BIG)

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: 26-07-1999 : BIG\28648GB : 13-09-2002 : 003 MSDS established Revision date Reference number Revision number

Reason for revision : Directive 2001/58/EC

#### 4.3 After inhalation:

- Remove the victim into fresh air

- Keep warm and at rest Trained personnel may administer oxygen if necessary Consult a doctor/medical service if breathing problems develop

#### 4.4 After ingestion:

- Never give anything by mouth to an unconscious person
  Do not induce vomiting
  If conscious rinse mouth with water and give sips of water to drink
  Give fruit juice to drink for neutralisation
  Consult a doctor/medical service

### Fire-fighting measures

#### 5.1 Suitable extinguishing media:

- Water sprayPolyvalent foam
- BC powder
- Carbon dioxide

#### 5.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium

#### 5.3 Special exposure hazards:

- Hazardous decomposition products may be evolved in a fire (see section 10.3)
   Avoid run-off water entering drains (e.g. use barriers)

#### 5.4 Instructions:

- Dilute toxic gases with water spray
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

- 5.5 Special protective equipment for firefighters:
   Self-contained breathing apparatus with full face piece
  - Protective clothing for exposure to chemicals

### Accidental release measures

#### 6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

### 6.2 Environmental precautions:

- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Contain leaking substance, pump over in suitable containers
   Plug the leak, cut off the supply
   Dam up the liquid spill

### 6.3 Methods for cleaning up:

- Take up liquid spill into inert absorbent material Scoop absorbed substance into closing containers
- Carefully collect the spill/leftovers
- Clean contaminated surfaces with a soap solution
- Wash clothing and equipment after handling

### Handling and storage

#### 7.1 Handling:

- Observe very strict hygiene avoid contact
   Avoid contact with skin and eyes
   Ensure adequate ventilation of the workplace
   Avoid inhaling vapours/fumes which may be released during use
   Avoid inhaling dust when grinding/sanding/cutting cured material
- Do not eat, drink or smoke in the work area
   Wash hands after handling material
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately
- Clean contaminated clothing

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#### 7.2 Storage:

- Keep container tightly closedStore in a cool area
- Store in a dry area
- Store in a well-ventilated areaKeep away from: heat sources, acids

Storage temperature **:** 23 ٥C : N.D. Quantity limits kg Storage life **:** 365 days

Materials for packaging

- suitable : no data available

- to avoid :no data available

#### 7.3 Specific uses:

- Refer to Tyco Electronics product installation instructions The curing process is exothermic (releases heat)

### **Exposure controls/Personal protection**

#### 8.1 Exposure limit values:

: not listed
: not listed TLV-TWA TLV-STEL TLV-Ceiling : not listed

: not listed
: not listed OES-LTEL OES-STEL : not listed MEL-LTEL MEL-STEL : not listed

: not listed MAK TRK : not listed

MAC-TGG 8 h : not listed MAC-TGG 15 min. : not listed MAC-Ceiling : not listed

VME-8 h : not listed VLE-15 min. : not listed

: not listed
: not listed GWBB-8 h GWK-15 min. Momentary value : not listed

: not listed
: not listed EC-STEL

#### Sampling methods:

Triethylene Tetramine (Ethylenediamine)Triethylene Tetramine

NIOSH 2540 OSHA 60

#### 8.2 Exposure controls:

#### 8.2.1 Occupational exposure controls:

- Measure the concentration in the air regularly
- Use general and/or local exhaust ventilation of the workplace
- Curing ovens must be exhausted to outdoors or to suitable emission control device
- Use local exhaust ventilation when grinding/sanding/cutting cured material

### **8.2.2 Environmental exposure controls:** see heading 13

#### 8.3 Personal protection:

### 8.3.1 respiratory protection:

- Not required for normal conditions of use
- If ventilation is inadequate to control exposure during use, a suitable

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respirator or air-supplied equipment should be worn

#### 8.3.2 hand protection:

- Impervious gloves

PVC Suitable materials: Rubber

- Breakthrough time: N.D.

#### 8.3.3 eye protection:

- Safety glasses with side shields or goggles

#### 8.3.4 skin protection:

- Protective clothing

PVC Suitable materials: Rubber

### Physical and chemical properties

#### 9.1 General information:

Appearance (at 20°C) : Liquid Odour : Amine Colour : Amber

#### 9.2 Important health, safety and environmental information:

pH value : 11 (50 %) : > 200 : > 200 Boiling point/boiling range ٥C °C Flashpoint Explosion limits : N.D. vol% ( °C) Vapour pressure (at 20°C) Vapour pressure (at 50°C) < 0.1 hPa : N.D. hPa Relative density (at 20°C) Water solubility : 0.96 : Insoluble Soluble in : N.D. Relative vapour density N.D. Viscosity : 0.3/0.6 Pa.s Partition coefficient n-octanol/water : N.D. Evaporation rate ratio to butyl acetate ratio to ether : N.D. Decomposition temperature ٥C

### 9.3 Other information:

Melting point/melting range : N.D. ٥C Auto-ignition point ٥C : N.D. : N.D.  $g/m^3$ Saturation concentration

### Stability and reactivity

### 10.1 Conditions to avoid/reactivity:

- Stable under normal conditions

#### 10.2 Materials to avoid:

Keep away from: heat sources, acids

### 10.3 Hazardous decomposition products:

- May react exothermically with epoxy resins
- Thermal decomposition and combustion products may include, but are not limited to: carbon monoxide, carbon dioxide, oxides of nitrogen and other harmful gases/vapours

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### **Toxicological information**

#### 11.1 Acute toxicity:

```
LD50 oral rat
LD50 dermal rat
LD50 dermal rabbit
LC50 inhalation rat
LC50 inhalation rat
                                               : > 15000
                                                                                            mg/kg
                                               : N.D. : N.D.
                                                                                            mg/kg
                                                                                           mg/kg
mg/l/4 h
                                             : N.D.
: N.D.
                                                                                           ppm/4 h
```

#### 11.2 Chronic toxicity:

```
EC carc. cat.
                                        : not listed
                                        : not listed
: not listed
EC muta. cat.
EC repr. cat.
Carcinogenicity (TLV) : not listed Carcinogenicity (MAC) : not listed Carcinogenicity (VME) : not listed Carcinogenicity (GWBB) : not listed
                                        : not listed
: not listed
Carcinogenicity (MAK)
Mutagenicity (MAK)
Teratogenicity (MAK)
                                        : not listed
IARC classification
                                        : not listed
```

Skin and eye contact and if swallowed Inhalation of thermal decomposition products 11.3 Routes of exposure:

#### 11.4 Acute effects/symptoms:

- AFTER INHALATION
- Not a normal route of exposure Vapours evolved during heat curing processes, and dust formed when grinding/sanding/cutting cured material, can cause irritation of the respiratory tract
- Symptoms may include sore nose and throat, coughing, sneezing and breathing difficulties
- AFTER INGESTION
- Not expected to cause adverse health effects if small amounts are swallowed incidental to normal handling
   May cause irritation of the gastric/intestinal mucosa
   Symptoms may include pain, nausea, vomiting, abdominal tenderness and blood
- in vomit/faeces
- AFTER SKIN CONTACT
   May cause skin irritation and dermatitis
- Symptoms may include redness, swelling and itching
- AFTER EYE CONTACT
- Symptoms may include pain, redness and watering of the eyes, swelling and blurred vision
   Risk of serious damage to the eyes

#### 11.5 Chronic effects:

- May cause sensitization by skin contact If skin sensitization has developed and a causal relationship has been established, further exposure should not be allowed
- ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
- Skin rash/inflammation

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### 12. Ecological information

#### 12.1 Ecotoxicity:

- No data available

#### 12.2 Mobility:

- Volatile organic compounds (VOC): N.D.%
- Insoluble in water

For other physicochemical properties see heading 9.

#### 12.3 Persistence and degradability:

- biodegradation BOD<sub>5</sub> % ThOD N.D.

- water • - Not readily degradable in water

- soil : T ½: N.D. days

#### 12.4 Bioaccumulative potential:

: N.D. - log P<sub>ow</sub>

#### 12.5 Other adverse effects:

: 2 (internal company classification)

- Effect on the ozone layer : Not dangerous for the ozone layer

(Council Regulation (EC) No

3093/94, O.J. L333 of 22/12/94)

: no data available - Greenhouse effect : no data available - Effect on waste water purification

### **Disposal considerations**

- 13.1 Provisions relating to waste:
   Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 09 (waste adhesives and sealants containing organic solvents or other dangerous substances)
   Hazardous waste (91/689/EEC)
   Not classified as hazardous waste when mixed with S1005 Part A and fully guard

  - cured

- 13.2 Disposal methods:

   Landfill or incinerate at a licensed site in accordance with national and local regulations

   The principle of combustible solvent

  - Dissolve or mix with a combustible solvent Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
  - Do not discharge into the sewer

#### 13.3 Packaging/Container:

Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

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### **Transport information**

14.1 Classification of the substance in compliance with UN Recommendations

UN number CLASS SUB RISKS : PACKING : :

PROPER SHIPPING NAME

14.2 ADR (transport by road)

DANGER LABEL PACKAGES

CLASS : NOT SUBJECT PACKING DANGER LABEL TANKS :

14.3 RID (transport by rail)

CLASS : NOT SUBJECT

**PACKING** 

DANGER LABEL TANKS DANGER LABEL PACKAGES

14.4 ADNR (transport by inland waterways)

: NOT SUBJECT CLASS

**PACKING** DANGER LABEL TANKS : DANGER LABEL PACKAGES :

14.5 IMDG (maritime transport)

CLASS : NOT SUBJECT

SUB RISKS PACKING MFAG : EMS MARINE POLLUTANT

14.6 ICAO (air transport)

: NOT SUBJECT CLASS

SUB RISKS **PACKING** PACKING INSTRUCTIONS PASSENGER AIRCRAFT PACKING INSTRUCTIONS CARGO AIRCRAFT

: not restricted for any mode of 14.7 Special precautions in connection with international transport

transport

#### 15. Regulatory information

Classification according to directives 67/548/EEC and 1999/45/EC (\*\*: see heading 16)



triethylenetetramine contains:

R38 : Irritating to skin

: Risk of serious damage to eyes R41

: May cause sensitization by skin contact R43

S26 : In case of contact with eyes, rinse immediately with plenty of

water and seek medical advice

S36/37/39 : Wear suitable protective clothing gloves, and eye/face

protection

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#### Other information

Users are advised that they may have additional disclosure obligations under other national and local laws. Users are advised to ensure that this information is brought to the attention of all employees, agents, and contractors handling this product. Users of Tyco Electronics products should make their own evaluation to determine the suitability of each such product for the specific application and to establish safe handling and installation procedures. Distributors of this product are advised to forward this document, or the information contained herein, to every purchaser of this product.

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N.A. = NOT APPLICABLE = NOT DETERMINED N.D.

= INTERNAL CLASSIFICATION

#### (\*\*) Labelling:

The labelling of the substance described in this MSDS complies with the provisions of Directive 1999/45/EC of 31 May 2001, published in the Official Journal of the European Communities L 200 of 30/07/1999. This Directive replaces Directive 88/379/EEC of 7 June 1988, published in the Official Journal of the European Communities L 187 of 16/07/1988. Member States shall apply the laws, regulations and administrative provisions referred to in article 22 of this Directive:

- (a) to preparations not within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2002; and
- (b) to preparations within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2004.

#### Full text of any R-phrases referred to under heading 2:

R 2.1 : Harmful in contact with skin

R34

Causes burns
Risk of serious damage to eyes R41

May cause sensitization by skin contact R43

R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the

aquatic environment

#### Exposure limits:

Threshold Limit Value - ACGIH USA 2002

Occupational Exposure Standards - United Kingdom 1999

Maximum Exposure Limits - United Kingdom 1999 Maximale Arbeitsplatzkonzentrationen - Germany 2001 MAK

Technische Richtkonzentrationen - Germany 2001 Maximale aanvaarde concentratie - The Netherlands 2002 TRK MAC

VME Valeurs limites de Moyenne d'Exposition - France 1999 VLE Valeurs limites d'Exposition à court terme - France 1999 GWBB :

Grenswaarde beroepsmatige blootstelling - Belgium 2002 Grenswaarde kortstondige blootstelling - Belgium 2002 GWK

EC Indicative occupational exposure limit values - directive 2000/39/EC

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