

Raychem Brand S1184 Adhesive, Part A

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

1.1 Product identifier:

Product name : Raychem Brand S1184 Adhesive, Part A
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Epoxy resin
 Professional use

1.2.2 Uses advised against

No uses advised against known

1.3 Details of the supplier of the safety data sheet:

Supplier of the safety data sheet

TYCO Electronics UK Ltd
 Faraday Road, Dorcan
 SN3 5HH Swindon, United Kingdom
 ☎ +44 1793 52 81 71
 📠 +44 1793 57 25 16
 REACH-ADM@te.com

1.4 Emergency telephone number:

24h/24h (Telephone advice: English, French, German, Dutch):
 +32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Eye Irrit.	category 2	H319: Causes serious eye irritation.
Skin Irrit.	category 2	H315: Causes skin irritation.
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Aquatic Acute	category 1	H400: Very toxic to aquatic life.
Aquatic Chronic	category 1	H410: Very toxic to aquatic life with long lasting effects.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

Xi; R36/38 - Irritating to eyes and skin.

R43 - May cause sensitisation by skin contact.

N; R50-53 - Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

2.2 Label elements:

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



Contains: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700).

Signal word Warning

H-statements

H319 Causes serious eye irritation.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.

Raychem Brand S1184 Adhesive, Part A

H410 Very toxic to aquatic life with long lasting effects.

P-statements

P280 Wear protective gloves and eye protection.
 P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards:

CLP

Material presenting a fire hazard

SECTION 3: Composition/information on ingredients

3.1 Substances:

Not applicable

3.2 Mixtures:

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to DSD/DPD	Classification according to CLP	Note	Remark
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) 01-2119456619-26	25068-38-6 500-033-5	10% <C<25%	Xi; R36/38 R43 N; R51-53	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411	(1)(8)(10)	Constituent
silver 01-2119555669-21	7440-22-4 231-131-3	C>30 %	N; R50-53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)(2)(9)	Constituent
Aromatic hydrocarbons, C8 01-2119486136-34	90989-38-1 292-694-9	0%<C<2%	Xn; R20/21 - 65 Xi; R38 R10	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Asp. Tox. 1; H304 Skin Irrit. 2; H315	(1)(2)(10)	Constituent

- (1) For R-phrases and H-statements in full: see heading 16
 (2) Substance with a Community workplace exposure limit
 (8) Specific concentration limits, see heading 16
 (9) M-factor, see heading 16
 (10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1 Description of first aid measures:

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute 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. Dry/sore throat. Coughing. Irritation of the nasal mucous membranes. Respiratory difficulties.

After skin contact:

Tingling/irritation of the skin.

After eye contact:

Dust from grinding, sanding or cutting cured material can cause: Redness of the eye tissue. Irritation of the eye tissue. Lacrimation. Visual disturbances.

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Revision number: 0600

Product number: 25808

2 / 17

Raychem Brand S1184 Adhesive, Part A

After ingestion:

Not a normal route of exposure. Irritation of the gastric/intestinal mucosa. Nausea. Vomiting. Diarrhoea.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:

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

5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

5.2 Special hazards arising from the substance or mixture:

Upon combustion CO and CO₂ are formed and formation of metallic fumes.

5.3 Advice for firefighters:

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Face-shield. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Face-shield. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2 Environmental precautions:

Contain leaking substance. Dam up the liquid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3 Methods and material for containment and 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.

6.4 Reference to other sections:

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:

Keep away from ignition sources/sparks. 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. Keep container tightly closed. Remove contaminated clothing immediately. Do not discharge the waste into the drain.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Keep container in a well-ventilated place. Keep only in the original container. Meet the legal requirements. Max. storage time: 6 month(s).

7.2.2 Keep away from:

Heat sources, oxidizing agents, (strong) acids, (strong) bases, amines.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

Raychem Brand S1184 Adhesive, Part A

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.
 Refer to TE Connectivity product installation instructions.
 The curing process is exothermic (releases heat).
 Part A can only be used with part B.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

The Netherlands

Ethylbenzeen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	49 ppm	
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	215 mg/m ³	
	Short time value (Public occupational exposure limit value)	97 ppm	
	Short time value (Public occupational exposure limit value)	430 mg/m ³	
Xyleen (o-,m- en p-isomeren)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	48 ppm	
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	210 mg/m ³	
	Short time value (Public occupational exposure limit value)	100 ppm	
	Short time value (Public occupational exposure limit value)	442 mg/m ³	
Zilver, metallisch	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	0.1 mg/m ³	

EU

Ethylbenzene	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	100 ppm	
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	442 mg/m ³	
	Short time value (Indicative occupational exposure limit value)	200 ppm	
	Short time value (Indicative occupational exposure limit value)	884 mg/m ³	
Xylene, mixed isomers, pure	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm	
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	221 mg/m ³	
	Short time value (Indicative occupational exposure limit value)	100 ppm	
	Short time value (Indicative occupational exposure limit value)	442 mg/m ³	

Belgium

Argent (métal)	Time-weighted average exposure limit 8 h	0.1 mg/m ³	
Ethylbenzène	Time-weighted average exposure limit 8 h	100 ppm	
	Time-weighted average exposure limit 8 h	442 mg/m ³	
	Short time value	125 ppm	
	Short time value	551 mg/m ³	
Xylène, isomères mixtes, purs	Time-weighted average exposure limit 8 h	50 ppm	
	Time-weighted average exposure limit 8 h	221 mg/m ³	
	Short time value	100 ppm	
	Short time value	442 mg/m ³	

USA (TLV-ACGIH)

Ethyl benzene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm	
---------------	--	--------	--

Raychem Brand S1184 Adhesive, Part A

Silver, metal, dust and fume	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 mg/m ³	
Xylene (all isomers)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	100 ppm	
	Short time value (TLV - Adopted Value)	150 ppm	

Germany

Ethylbenzol	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm	
	Time-weighted average exposure limit 8 h (TRGS 900)	88 mg/m ³	
Silber	Time-weighted average exposure limit 8 h (TRGS 900)	0.1 mg/m ³	
Xylol (alle Isomeren)	Time-weighted average exposure limit 8 h (TRGS 900)	100 ppm	
	Time-weighted average exposure limit 8 h (TRGS 900)	440 mg/m ³	

France

Argent (métallique)	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	0.1 mg/m ³	
Ethylbenzène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm	
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	88.4 mg/m ³	
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm	
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³	
Xylènes, isomères mixtes, purs	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm	
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	221 mg/m ³	
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm	
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³	

UK

Ethylbenzene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	100 ppm	
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	441 mg/m ³	
	Short time value (Workplace exposure limit (EH40/2005))	125 ppm	
	Short time value (Workplace exposure limit (EH40/2005))	552 mg/m ³	
Silver, metallic	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	0.1 mg/m ³	
Xylene, o-,m-,p- or mixed isomers	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm	
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	220 mg/m ³	
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm	
	Short time value (Workplace exposure limit (EH40/2005))	441 mg/m ³	

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

If applicable and available it will be listed below.

Ethyl Benzene (Hydrocarbons, Aromatic)	NIOSH	1501
Ethyl Benzene	OSHA	7
Silver (Ag) (Elements)	NIOSH	7300
Silver (Ag) (Elements, aqua regia ashing)	NIOSH	7301

Raychem Brand S1184 Adhesive, Part A

Silver (Ag) (Elements, hot block/HCl/HNO3 digestion)	NIOSH	7303
Silver (Ag)	NIOSH	8005
Silver (Ag)	NIOSH	8310
Silver (Elements on wipes)	NIOSH	9102
Silver	OSHA	ID 121
Xylene (Hydrocarbons, aromatic)	NIOSH	1501
Xylene (Volatile Organic compounds)	NIOSH	2549

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL - Workers

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	12.25 mg/m ³	
	Acute systemic effects inhalation	12.25 mg/m ³	
	Long-term systemic effects dermal	8.33 mg/kg bw/day	
	Acute systemic effects dermal	8.33 mg/kg bw/day	

silver

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.1 mg/m ³	

Aromatic hydrocarbons, C8

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	289 mg/m ³	
	Acute local effects inhalation	870 mg/m ³	
	Long-term systemic effects dermal	180 mg/kg bw/day	
	Long-term systemic effects inhalation	77 mg/m ³	

DNEL - General population

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	3.571 mg/kg bw/day	
	Acute systemic effects dermal	3.571 mg/kg bw/day	
	Long-term systemic effects oral	0.75 mg/kg bw/day	
	Acute systemic effects oral	0.75 mg/kg bw/day	

silver

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.04 mg/m ³	
	Long-term systemic effects oral	1.2 mg/kg bw/day	

Aromatic hydrocarbons, C8

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	174 mg/m ³	
	Acute local effects inhalation	870 mg/m ³	
	Long-term systemic effects dermal	108 mg/kg bw/day	
	Long-term systemic effects inhalation	14.8 mg/m ³	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

PNEC

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Compartments	Value	Remark
Fresh water	0.006 mg/l	
Marine water	0.0006 mg/l	
Aqua (intermittent releases)	0.018 mg/l	
STP	10 mg/l	
Fresh water sediment	0.996 mg/kg sediment dw	
Marine water sediment	0.0996 mg/kg sediment dw	
Soil	0.196 mg/kg soil dw	
Oral	11 mg/kg food	

Raychem Brand S1184 Adhesive, Part A

silver

Compartment	Value	Remark
Fresh water	0.04 µg/l	
Marine water	0.86 µg/l	
STP	0.025 mg/l	
Fresh water sediment	438.13 mg/kg sediment dw	
Marine water sediment	438.13 mg/kg sediment dw	
Soil	1.41 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. 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 Individual protection measures, such as personal protective equipment

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. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Insufficient ventilation: wear respiratory protection.

b) Hand protection:

Gloves.

- materials (good resistance)

Nitrile rubber.

c) Eye protection:

Safety glasses. Use personal protective equipment as required by the risk assessment.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical form	Viscous
Odour	Aromatic odour
Odour threshold	No data available
Colour	Silvery-grey
Particle size	No data available
Explosion limits	No data available
Flammability	Material presenting a fire hazard
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	> 150 °C
Flash point	77 °C
Evaporation rate	No data available
Relative vapour density	> 2
Vapour pressure	No data available
Solubility	water ; insoluble
Relative density	2.0
Decomposition temperature	No data available
Auto-ignition temperature	310 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2 Other information:

No data available

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Product number: 25808

Revision number: 0600

7 / 17

Raychem Brand S1184 Adhesive, Part A

SECTION 10: Stability and reactivity

10.1 Reactivity:

Temperature above flashpoint: higher fire/explosion hazard.

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

Reacts exothermically with many compounds e.g.: (strong) oxidizers and (strong) acids/bases.

10.4 Conditions to avoid:

Keep away from ignition sources/sparks.

10.5 Incompatible materials:

Oxidizing agents, (strong) acids, (strong) bases, amines.

10.6 Hazardous decomposition products:

Upon combustion CO and CO₂ are formed and formation of metallic fumes.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

11.1.1 Test results

Acute toxicity

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 420	>2000 mg/kg		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	>2000 mg/kg	24 h	Rat (male/female)	Experimental value	
Inhalation (vapours)	LC0	Other	0.000008 ppm	5 h	Rat (male)	Experimental value	

silver

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	> 5000 mg/kg bw		Rat (male/female)	Experimental value	
Dermal	LD50		>2000 mg/kg		Rat	Literature study	

Aromatic hydrocarbons, C8

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 423	3525 mg/kg		Rat (male)	Weight of evidence	
Oral	LD50	Equivalent to OECD 423	>4000 mg/kg		Rat (female)	Weight of evidence	
Dermal	LD50		>4200 mg/kg bw/day	4 h	Rabbit (male)	Weight of evidence	
Inhalation (vapours)	LC50	Equivalent to OECD 403	27.57 mg/l	4 h	Rat (male)	Experimental value	
Inhalation	LD50	Equivalent to OECD 403	6350 ppm	4 h	Rat (male)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

Raychem Brand S1184 Adhesive, Part A

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72; 168 hours	Rabbit	Experimental value	Single exposure
Skin	Slightly irritating	OECD 404	4 h	1; 24; 48; 72; 168 hours	Rabbit	Experimental value	

silver

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405	1 seconds	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

Aromatic hydrocarbons, C8

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Moderately irritating			24; 48; 72 hours	Rabbit	Weight of evidence	
Skin	Moderately irritating		24 h	24; 72 hours	Rabbit	Weight of evidence	

Classification is based on the relevant ingredients

Conclusion

Causes skin irritation.

Causes serious eye irritation.

Respiratory or skin sensitisation

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 429			Mouse (female)	Experimental value	

silver

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Buehler test	3 week(s)	24; 48 hours	Guinea pig (male/female)	Weight of evidence	

Aromatic hydrocarbons, C8

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse	Weight of evidence	

Classification is based on the relevant ingredients

Conclusion

May cause an allergic skin reaction.

Specific target organ toxicity

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	50 mg/kg bw/day		No effect	14 weeks (daily)	Rat (male/female)	Experimental value
Dermal	NOAEL	OECD 411	100 mg/kg bw/day		No adverse systemic effects	13 weeks (3 times/week)	Mouse (male)	Experimental value

silver

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	OECD 408	30 mg/kg bw/day		No effect	13 weeks (daily)	Rat (male/female)	Experimental value
Inhalation (dust)	NOAEC	OECD 413	133 $\mu\text{g}/\text{m}^3$		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Revision number: 0600

Product number: 25808

9 / 17

Raychem Brand S1184 Adhesive, Part A

Aromatic hydrocarbons, C8

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	LOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	Weight gain	90 day(s)	Rat (male/female)	Experimental value

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 472	Bacteria (S.typhimurium)	No effect	Experimental value
Positive	Other	Mouse (lymphoma L5178Y cells)		Experimental value

silver

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 487	Human lymphocytes	No effect	Experimental value

Aromatic hydrocarbons, C8

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 479	Chinese hamster ovary (CHO)		Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 475	Chinese hamster ovary (CHO)		Experimental value

Mutagenicity (in vivo)

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Chromosome aberration assay		Mouse (male)		Experimental value

Aromatic hydrocarbons, C8

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 478		Mouse (male/female)		Experimental value
Negative	Equivalent to OECD 478		Rat (male/female)		Experimental value

Carcinogenicity

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Dermal	NOEL	OECD 453	100 mg/kg	104 weeks (3 times/week)	Mouse (male)	Experimental value		No carcinogenic effect
Oral	NOAEL	OECD 453	15-100 mg/kg/d	104 weeks (daily)	Rat (male/female)	Experimental value		No carcinogenic effect

Aromatic hydrocarbons, C8

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Oral	NOAEL	Equivalent to OECD 451	>1000 mg/kg	103 weeks (daily, 5 days/week)	Mouse (male/female)	Experimental value		No effect

Reproductive toxicity

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Revision number: 0600

Product number: 25808

10 / 17

Raychem Brand S1184 Adhesive, Part A

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	> 540 mg/kg/d	6 - 15 days (gestation, daily)	Rat (female)	No effect	Foetus	Experimental value
Maternal toxicity	NOAEL	OECD 414	180 mg/kg bw/day	6 - 15 days (gestation, daily)	Rat (female)	No effect		Experimental value
Effects on fertility	NOEL	OECD 416	50 - 540 mg/kg bw/day	238 day(s)	Rat (male/female)	No effect		Experimental value

silver

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	> 100 mg/kg bw/day	14 days (gestation, daily)	Rat (female)	No effect		Experimental value

Aromatic hydrocarbons, C8

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	EPA OPPTS 870.3800	2171 mg/m ³	42 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect	General	Experimental value
Effects on fertility	NOAEC (P)	EPA OPPTS 870.3800	\geq 500 ppm		Rat (male/female)	No effect	General	Experimental value
	NOAEC (F1)	EPA OPPTS 870.3800	\geq 1000 ppm		Rat (male/female)	No effect	General	Experimental value

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

Chronic effects from short and long-term exposure

Raychem Brand S1184 Adhesive, Part A

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Swelling of the skin. Itching. May stain the skin. Blue/grey discolouration of the skin.

SECTION 12: Ecological information

12.1 Toxicity:

Raychem Brand S1184 Adhesive, Part A

No (test)data on the mixture available

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.3 mg/l	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity invertebrates	EC50	Equivalent to OECD 202	1.1 - 2.8 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC50	EPA 660/3 - 75/009	9.4 mg/l	72 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value; Biomass
Long-term toxicity aquatic invertebrates	NOEC	Equivalent to OECD 211	0.3 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	IC50		> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Revision number: 0600

Product number: 25808

11 / 17

Raychem Brand S1184 Adhesive, Part A

silver

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		1.2 µg/l	96 h	Pimephales promelas	Semi-static system	Fresh water	Experimental value; Silver ion
Acute toxicity invertebrates	LC50		0.22 µg/l	48 h	Daphnia magna	Semi-static system	Fresh water	Experimental value; Silver ion
Toxicity algae and other aquatic plants	IC50	US EPA	4.61 µg/l	96 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC	ASTM E1241-98	0.351 µg/l	32 day(s)	Pimephales promelas	Flow-through system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic invertebrates	NOEC	US EPA	0.32 µg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; Lethal

Aromatic hydrocarbons, C8

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity invertebrates	EC50		1.0 mg/l	48 h	Daphnia magna			Literature
Toxicity algae and other aquatic plants	IC50		2.2 mg/l	72 h	Algae			Literature

Classification is based on the relevant ingredients

Conclusion

Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	5 %	28 day(s)	Experimental value
OECD 301B: CO2 Evolution Test	6 - 12 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.91	6.44 h	500000 /cm ³	QSAR

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
OECD 111: Hydrolysis as a function of pH	86 h		Experimental value

Conclusion

Contains non readily biodegradable component(s)

12.3 Bioaccumulative potential:

Raychem Brand S1184 Adhesive, Part A

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		3 - 31			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		≥ 2.918	25 °C	Experimental value

silver

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Raychem Brand S1184 Adhesive, Part A

Aromatic hydrocarbons, C8

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		25.9			Literature

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.2		

Conclusion

Does not contain bioaccumulative component(s)

12.4 Mobility in soil:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	2.65	QSAR

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	0 %		1.9 %	84.3 %	13.8 %	Calculated value

Conclusion

Contains component(s) that adsorb(s) into the soil

Contains component(s) with potential for mobility in the soil

12.5 Results of PBT and vPvB assessment:

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6 Other adverse effects:

Raychem Brand S1184 Adhesive, Part A

Global warming potential (GWP)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Aromatic hydrocarbons, C8

Ground water

Ground water pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants containing organic solvents or other dangerous substances). Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Directive 2008/98/EC. Not classified as hazardous waste when part A and part B are mixed and are fully cured.

13.1.2 Disposal methods

Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1 UN number:

UN number	3082
-----------	------

14.2 UN proper shipping name:

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Revision number: 0600

Product number: 25808

13 / 17

Raychem Brand S1184 Adhesive, Part A

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (silver)
----------------------	--

14.3 Transport hazard class(es):

Hazard identification number	90
Class	9
Classification code	M6

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	yes
--	-----

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1 UN number:

UN number	3082
-----------	------

14.2 UN proper shipping name:

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (silver)
----------------------	--

14.3 Transport hazard class(es):

Hazard identification number	90
Class	9
Classification code	M6

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	yes
--	-----

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1 UN number:

UN number	3082
-----------	------

14.2 UN proper shipping name:

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (silver)
----------------------	--

14.3 Transport hazard class(es):

Class	9
Classification code	M6

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	yes
--	-----

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Special provisions	601
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1 UN number:

UN number	3082
-----------	------

14.2 UN proper shipping name:

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (silver)
----------------------	--

Raychem Brand S1184 Adhesive, Part A

14.3 Transport hazard class(es):

Class	9
-------	---

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Marine pollutant	P
Environmentally hazardous substance mark	yes

14.6 Special precautions for user:

Special provisions	274
Special provisions	335
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

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

Annex II of MARPOL 73/78	
--------------------------	--

Air (ICAO-TI/IATA-DGR)

14.1 UN number:

UN number	3082
-----------	------

14.2 UN proper shipping name:

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (silver)
----------------------	--

14.3 Transport hazard class(es):

Class	9
-------	---

14.4 Packing group:

Packing group	III
Labels	9

14.5 Environmental hazards:

Environmentally hazardous substance mark	yes
--	-----

14.6 Special precautions for user:

Special provisions	A97
Special provisions	A158
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	30 kg G

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
0 - 1.96 %	

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

The identified uses are not covered by restrictions of Annex XVII of Regulation (EC) No 1907/2006

National legislation The Netherlands

Raychem Brand S1184 Adhesive, Part A

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 05
Waterbezwaarlijkheid	1

Aromatic hydrocarbons, C8

SZW - List of reprotoxic substances (development)	Possibly hazardous to the foetus
---	----------------------------------

National legislation Germany

Raychem Brand S1184 Adhesive, Part A

WGK	3; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
-----	---

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

TA-Luft	5.2.5; I
---------	----------

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Revision number: 0600

Product number: 25808

15 / 17

Raychem Brand S1184 Adhesive, Part A

silver

Schwangerschaft Gruppe	D
MAK 8-Stunden-Mittelwert mg/m ³	Silber; 0.1 mg/m ³ ; gemessen als einatembare Fraktion (vgl. Abschn. Vd) S. 191)
TA-Luft	5.2.5; I

Aromatic hydrocarbons, C8

MAK - Krebserzeugend Kategorie	4
Schwangerschaft Gruppe	D
Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	Ethylbenzol; 20 ppm Xylol (alle Isomeren); 100 ppm
MAK 8-Stunden-Mittelwert mg/m ³	Ethylbenzol; 88 mg/m ³ Xylol (alle Isomeren); 440 mg/m ³
TA-Luft	5.2.5; I

National legislation France

Raychem Brand S1184 Adhesive, Part A

No data available

National legislation Belgium

Raychem Brand S1184 Adhesive, Part A

No data available

Other relevant data

Raychem Brand S1184 Adhesive, Part A

No data available

Aromatic hydrocarbons, C8

TLV - Carcinogen	Ethyl benzene; A3
IARC - classification	3; Xylenes
TLV - Carcinogen	Xylene (all isomers); A4

15.2 Chemical safety assessment:

No chemical safety assessment is required.

SECTION 16: Other information

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labels



Irritant



Dangerous for the environment

Contains: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700).

R-phrases

- 36/38 Irritating to eyes and skin
- 43 May cause sensitisation by skin contact
- 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-phrases

- 24 Avoid contact with skin
- 37 Wear suitable gloves
- 60 This material and its container must be disposed of as hazardous waste
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Additional recommendations

Contains epoxy constituents. See information supplied by the manufacturer.

Full text of any R-phrases referred to under headings 2 and 3:

- R10 Flammable
- R20/21 Harmful by inhalation and in contact with skin
- R36/38 Irritating to eyes and skin

Reason for revision: 2, 3, 9, 11, 12, 15

Publication date: 1999-06-15

Date of revision: 2014-10-20

Reference number: 3032AE

Product number: 25808

Revision number: 0600

16 / 17

Raychem Brand S1184 Adhesive, Part A

R38 Irritating to skin
R43 May cause sensitisation by skin contact
R50 Very toxic to aquatic organisms
R51 Toxic to aquatic organisms
R53 May cause long-term adverse effects in the aquatic environment
R65 Harmful: may cause lung damage if swallowed

Full text of any H-statements referred to under headings 2 and 3:

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive
DPD Dangerous Preparation Directive
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

Specific concentration limits CLP

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	C \geq 5%	Eye Irrit. 2; H319	CLP Annex VI (ATP 0)
	C \geq 5 %	Skin Irrit. 2; H315	CLP Annex VI (ATP 0)

Specific concentration limits DSD

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)	C \geq 5 %	Xi; R36/38	DSD Annex VI (ATP 0)
--	--------------	------------	----------------------

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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 TE Connectivity 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.

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