

SAFETY DATA SHEET

Based on Directive 91/155/EEC of the Commission of
the European Communities

Shrinktek Heat-Shrinkable Products

1. Identification of the substance/preparation and the company

1.1 IDENTIFICATION OF THE SUBSTANCE OR PREPARATION:

Shrinktek Heat-Shrinkable Products

Tubing: SPC, SP, SPUL, SPLT, SPZH, SPTW, SP3X, SPDW, SK, SE, SMWP, S200 (Silicone), SPLICES

CAS no. : N.A. Reference : ST/3002 Revision 4

EC Index no. : N.A. NFPA code : N.D.

EINECS no. : N.A. Molecular weight : N.A.

RTECS no. : N.A. Formula : N.A.

1.2 COMPANY/UNDERTAKING IDENTIFICATION:

Shrinktek Polymers International Ltd

Unit A, Staverton Technology Park

Gloucester Road

Cheltenham, Glos

GL51 6TJ., United Kingdom

Tel: (+44) 1452 714900 Fax: (+44) 1452 714959

1.3 Telephone number for emergency:

(+32) 14-58 45 45

Information centre of dangerous goods (B.I.G.)

Technische Schoolstraat 43A, B-2440 Geel, Belgium

2. Composition/information on ingredients

Plastic materials may be based on polyethylene and olefin copolymers, chloropolymers, polyamides or silicones. Products may be coated with, or used in conjunction with adhesives/Mastics based on polyamides and/or olefin copolymers.

3. Hazards identificaton

- This safety Data Sheet applies to a group of products that are not hazardous as supplied.
- Products may emit hazardous thermal decomposition products if overheated or burnt (see section 10.2)

4. First aid measures

4.1 EYE CONTACT:

- If molten material contacts the eyes:

Rinse immediately with plenty of water for 15 minutes.

- Consult a doctor/medical service if irritation persists.

4.2 SKIN CONTACT:

- If molten material contacts the skin:

Immediately flush with cold water for 15 minutes

Do not attempt to remove material stuck to the skin – treat as a burn.

- Consult a doctor/medical service.

4.3 AFTER INHALTION:

- If exposed to fumes from overheated or burnt material:

Remove the victim into fresh air

Keep warm and at rest

- Consult a doctor/medical service if breathing problems develop

4.4 AFTER INGESTION:

Not applicable

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5. Fire-fighting measures

- 5.1 SUITABLE EXTINGUISHING MEDIA:
- Water spray
 - Polyvalent foam
 - Dry chemical
 - Carbon dioxide
- 5.2 UNSUITABLE EXTINGUISHING MEDIA:
- No data available.
- 5.3 SPECIAL EXPOSURE HAZARDS:
- Toxic decomposition products may be evolved in a fire (see section 10.2)
- 5.4 INSTRUCTIONS:
- Not applicable
- 5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:
- Self-contained breathing apparatus with full-face piece.
 - Protective clothing for exposure to chemicals.

6. Accidental release measures

- 6.1 PERSONAL PROTECTION:
- Wear personal protective equipment (see section 8.3)
- 6.2 ENVIRONMENTAL PRECAUTIONS:
- Not applicable.
- 6.3 CLEAN-UP
- Pick-up for continued use or disposal

7. Handling and storage

- 7.1 HANDLING
- Refer to Shrinktek product installation instructions
 - Avoid overheating the product after shrinkage has occurred
 - Stop heating immediately if the product blisters, chars or shows others signs of degradation
 - Avoid inhaling fumes which may be released and ventilate the area thoroughly before resuming work.
 - Avoid contact with molten material
 - Wash hands before eating, drinking or smoking.
- 7.2 STORAGE:
- Store in original packaging in a cool and dry area.
- STORAGE TEMPERATURE: < 40°C
- Product should be stored at temperatures below 40°C to void pre-recovery of expanded product.
- 7.3 MATERIALS FOR PACKAGING:
- Materials to avoid: no data available.

8. Exposure controls/Personal protection

- 8.1 RECOMMENDED ENGINEERING CONTROLS:
- Use local exhaust ventilation of the workplace
 - When using gas torches in confined spaces, ensure an adequate supply of fresh air to avoid oxygen depletion.

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SAMPLING METHODS:

- Not applicable

8.2 EXPOSURE LIMITS:

TLV (8 hour TWA) UK OEL (EH40/99):

- Not applicable

8.3 PERSONAL PROTECTION:

Eye Protection:

- Safety glasses with side shield, goggles or face shield depending on the application

Hand Protection:

- Heat resistant gloves if handling hot products after installation

Skin Protection:

- Protective clothing

Respiratory Protection:

- Not required for normal conditions of use
- Approved respirator or self contained breathing apparatus for installations in confined/unventilated areas.

Other:

- Practice good standards of personal and industrial hygiene.

9. Physical and chemical properties

9.1	Appearance (at 20°C)	: Plastic tubing	
9.2	Odour	: None	
9.3	Colour	: Various	
9.4	Ph value	: N.A.	
9.5	Boiling point/Boiling range	: N.A.	°C
9.6	Melting point/Melting range	: 70-170	°C (Adhesive)
9.7	Flashpoint	: N.A.	°C
9.8	Auto-ignition point	: N.D.	°C
9.9	Explosion limits	: N.A.	vol%
9.10	Vapour pressure (at 20°C)	: N.A.	hpa
9.11	Relative density (at 20°C)	: 0.9-2.2	
9.12	Water solubility (at 20°C)	: Insoluble	
9.13	Soluble in	: N.D.	
9.14	Relative vapour density	: N.A.	
9.15	Saturation concentration	: N.A.	g/m ³
9.16	Viscosity	: N.A.	Pa.s

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10. Stability and reactivity

10.1 STABILITY:

- Stable under normal conditions

10.2 REACTIVITY/HAZARDOUS DECOMPOSITION PRODUCTS:

- Thermal decomposition is not significant when products are used in accordance with Shrinktek product installation instructions.
- At higher temperatures, and if materials burn, thermal decomposition products will depend on the base polymer used and may include, but are not limited to: alcohols, aldehydes,

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carbon monoxide, carbon dioxide, hydrocarbons, hydrogen bromide, hydrogen chloride,
silicon dioxide and oxides of nitrogen, phosphorus and sulphur.

- 10.3 CONDITIONS/MATERIALS TO AVOID:
- Not applicable

11. Toxicological information

11.1 ACUTE TOXICITY:

LD50 Oral rat	: N.D.	mg/kg
LD50 Dermal rat	: N.D.	mg/kg
LD50 Dermal rabbit	: N.D.	mg/kg
LC50 Inhalation rat	: N.D.	mg/1/4 h

11.2 CHRONIC TOXICITY:

EC carc. Cat.: not listed
EC muta. Cat.: not listed
EC repr. Cat.: not listed
Carcinogenicity (TLV) : not listed

IARC classification: These products have not been evaluated

- 11.3 ROUTES OF EXPOSURE: Inhalation of thermal decomposition products.

11.4 ACUTE EFFECTS/SYMPTOMS:

EYES:

- Overheating products during installation may produce vapours/fumes that can cause irritation and redness of the eye tissue.

SKIN:

- Contact with molten material may cause thermal burns

INHALATION:

- Overheating products during installation may produce vapours/fumes that can cause irritation of the respiratory tract. Symptoms may include coughing, headache, dizziness, nausea and in the absence of ventilation, possible asphyxiation.

INGESTION:

- Not a normal route of exposure

11.5 CHRONIC EFFECTS:

- None known

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12. Ecological information

12.1 MOBILITY:

- Insoluble in water

12.2 BIODEGRADATION:

- Soil	T ½	: N.D.	days
	BOD5	: N.A.	g o2/g substance
	COS	: NA.	g o2/g substance

- Water: - Not readily biodegradable

12.3 BIOACCUMULATION:

- log Pow : N.D.
- BCF : N.D.

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- 12.4 AQUATIC TOXICITY:
- No data available

- 12.5 OTHER INFORMATION:
- WGK: N.D.
- Effect on the ozone layer: None
- Waste water purification : N.D.

13 Waste Disposal Considerations

- 13.1 PROVISIONS RELATING TO WASTE:
- Waste code (EC) : N.A.
- 13.2 DISPOSAL METHODS:
- Landfill or incinerate at an approved site in accordance with national and local regulations.
- For incineration use a high temperature incinerator equipped with secondary combustion chamber and acid gas scrubber.

14 Transport Information

- 14.1 Proper shipping name: N.A
- 14.2 Transport by road/Rail (ADR/RID) : N.A.
Danger code: -
Danger labels on tanks: -
On packages: -
- 14.3 Substance identification number (UN number) : N.A.
Packing: -
- 14.4 Maritime transport (IMDG code) : N.A.
EMS : -
MFAG : -
Marine Pollutant: -
- 14.5 Inland navigation (ADNR) : N.A.
- 14.6 Air freight (ICAO) : N.A.
Instruction "passenger" : -
Instruction "cargo" : -
- 14.7 Other information : Not restricted for any mode of international transport

15 Regulatory information

Labelling in accordance with EC directive 67-548-EEC and 1999/45/EEC

NOT APPLICABLE

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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 Shrinktek 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.

N.A. - NOT APPLICABLE
N.D. - NOT DETERMINED
* - INTERNAL CLASIFICACION

MSDS established: : 15-09-99
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