



GTP1 - Heat Shrinkable Polyolefin Tubing

On request it is possible
To supply UL approved
material UL Category YDPU2

GTP1 is a heat shrinkable polyolefin tubing. Widely used in the harness field as electrical and mechanical protection; also used to identify cables. Flexible, flame retardant and Rohs conform. Its shrink ratio is 2:1 and particularly appreciated for the low shrink temperature. On request it is possible to supply UL approved material, UL category YDPU2.

Thermal Properties:

Usage temperatures:
-55°C +125°C

Shrink ratio:

Shrink ratio 2:1

Colors:

Black is standard color.
Other colors or bi-colors on request

Halogen Free: all colors

Flame Retardant:

Flame retardant according to
UL224 VW-1
(all colors excluded clear)

Applications:

- Harness
- Mechanical protection
- Illuminations
- General electrica

Certifications:

On request it is possible to supply
UL material Cat.YDPU2

Flame Retardant VW-1



Dimensions:

Diameter before shrinking mm.	After shrinking		Standard packing bobbins
	Diameter mm.	Wall thickness	
1.2	0.6	0.33 ± 0.05	400 ± 2
1.6	0.8	0.36 ± 0.05	400 ± 2
2.4	1.2	0.44 ± 0.05	400 ± 2
3.2	1.6	0.44 ± 0.05	400 ± 2
4.8	2.4	0.44 ± 0.08	200 ± 2
6.4	3.2	0.56 ± 0.08	200 ± 1
9.5	4.8	0.56 ± 0.08	100 ± 1
12.7	6.4	0.56 ± 0.08	100 ± 1
16.0	8.0	0.69 ± 0.08	100 ± 1
19.0	9.5	0.77 ± 0.15	100 ± 1
25.4	12.7	0.89 ± 0.15	50 ± 0.5
32.0	16.0	0.89 ± 0.15	50 ± 0.5
38.1	19.0	1.00 ± 0.15	50 ± 0.5
50.8	25.4	1.00 ± 0.15	50 ± 0.5
76.2	38.1	1.30 ± 0.20	25 ± 0.5
100.0	50.8	1.46 ± 0.20	25 ± 0.5
120.0	60.0	1.56 ± 0.20	25 ± 0.5

General characteristics:

Properties	Values
Shrinking ratio	2:1
Min. shrinking temperature	90°C
Continue operative temperature	-55°C +125°C
Longitudinal shrinking	5% (±5%)

Technical characteristics:

Properties	Test method	Values
Tensile strength		≥ 10.4 Mpa
Elongation		≥ 200%
Tensile strength after aging	158±1°C, 168 hr	70% of original
Elongation after aging		100%
Flammability	UL224	VW-1
Dielectric voltage withstand	UL224 60 sec. no breakdown	≥ 2500 Volt
Dielectric strenght	IEC243	≥ 15 KV/mm
Volume resistivity	IEC93	≥ 10 ¹⁴ Ω cm
Heat Shock	UL224 250°C 4h	No dripping No cracking
Corrosion action	UL224 158°C 168h	Pass
Copper compatibility	UL224 158°C 168h	Pass

It must be stored in a dry place, inside plastic bags, away from direct sunlight, weathering, chemical materials, direct heat sources or fire. Storage time is 12 months.

The values given above are believed to be accurate and given as a matter of information only. As usage conditions are beyond our control we suggest the customer to confirm values and product compatibility prior to its use. We don't guarantee nor accept any responsibility for any particular usage.



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MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product identification	GTP-1
Company Identification	Isolcavi sas di Ghidoni Anna Via Abitazione, 5/1 Loc.Monteveglio 40050 Valsamoggia (BO) Italy Tel. +39 051 83.24.85 Fax +39 051 83.26.01

2 COMPOSITION / INFORMATION ON INGREDIENTS

Polyolefin	(CH ₂ CH ₂) _n	50%	CAS. NO. 9002-88-4
Magnesium Hydroxide	Mg(OH) ₂	35%	CAS. NO. 1309-42-8
Phosphorus	(NH ₄ PO ₃) _n	10%	CAS. NO. 7723-14-0
Pigment		4%	CAS. NO. 83524-75-8
Printing Ink	Ink	1%	CAS. NO. 1314-23-4

3 HAZARD IDENTIFICATION

The product poses, as it is and used in appropriated conditions, no known hazard to human health or to the environment. Could generate hazardous components in case of combustion. See n. 5 for hazards in case of fire.

4 FIRST AID

In case of contact with skin: in case of reaction in sensitive individuals, wash with water for several minutes. If product heated over melting temperature contacts skin, remove immediately and cool rapidly with cold water. Seek medical advice.
In case of contact with eyes: in case of reaction in sensitive individuals, wash with water for several minutes and seek medical advice.
If swallowed: seek medical advice.
If inhaled: if vapours from burning or overheated product are inhaled provide fresh air and seek medical advice.

5 FIRE FIGHTING MEASURES

Extinguishing media: powder/Carbon dioxide (CO₂)/Foam/Water fog/foam
Extinguishing media not to be used: none
Special risk resulting from the exposure to combustion gases: this material may release fumes or more or less toxic gases in the event of fire. Exposure to these gases of fumes may pose health risk.
Special protective equipment for fire-fighting personnel: wear self-contained breathing apparatus.
Product is a flame retardant but will burn if continuously exposed to flame.

6 MEASURES IN CASE OF ACCIDENTAL LOSS

Individual protective equipment: no special measures required. Avoid contact with heated material. Gloves may be required to easily handle when hot after heat-shrinking.
If overheated avoid breathing fumes which may be evolved.
Environmental precautions: no special measures required. In common with all good industrial hygiene practise install adequately ventilated area.
Clean-up/absorption method: no special measures required. Sweep and dump in disposal container.

7 HANDLING AND STORAGE

Handling: no special measures required.

Storage: preferably store far from fire and inclement weather, at room temperature in unopened packs out of direct sunlight.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure limit for humans: none, in normal working conditions.

Special measures for reducing exposure: none in normal working conditions.

Personal protection: do not eat, drink or smoke. Wash hands after handling the material. Keep away from food and beverages. Avoid contact with eyes.

Personal protection equipment:

Respiratory protection: under normal operation, not necessary. Use sharp blades during the cutting process in order to avoid cutting powder. In case of high speed cutting in non-ventilated areas it could be necessary to wear protection mask over mouth and nose.

Hand protection: gloves may be required to easily handling when hot after shrinking.

Eye protection: under normal operation, not necessary.

Other protection: under normal operation, not necessary.

9 PHYSICAL AND CHEMICAL PROPERTIES

Form: solid (tubing) of various sizes

Color: several

Odor: slight plastic characteristic odor

pH value: not concerned

Initial boiling point: not applicable

Flash point: not applicable

Explosivity hazard: not explosive

Explosivity limits: not applicable

Vapour pressure: not applicable

Density: not applicable

Solubility: not applicable

10 STABILITY AND REACTIVITY

Conditions to avoid: no decomposition if used as prescribed.

Materials to avoid: no known during normal working conditions.

Hazardous decomposition products: none during normal working conditions. If overheated or burned harmful vapours can be generated.

11 TOXICOLOGICAL INFORMATIONS

Acute toxicity: unknown

Local effects: in certain sensitive individuals, may cause slight and brief irritation of the skin and ocular mucous membranes.

Sensitization: not concerned.

Skin: not irritating. Heated product has potential to cause thermal burn.

Eyes: if overheated or burned, vapors may irritate eyes.

Inhalation: harmful vapors produced by overheating or burning may cause irritation to the upper respiratory tract.

Ingestion: the ingestion of this item is considered highly improbable. There are no sufficient information of possible effects in case of ingestion.

12 ECOLOGICAL INFORMATIONS

Non-biodegradable material. Non-toxic in water.

Action on the ozone layer: not available

13 DISPOSAL CONSIDERATIONS

Product disposal information: comply with local regulations.
Packaging disposal information: comply with local regulations.

14 TRANSPORT INFORMATIONS

Transport is not restricted.

15 REGULATORY INFORMATIONS

This material is not classified as hazardous for the user; respect general rules regarding safe and health.

16 OTHER INFORMATIONS

The product must be used and/or installed by qualified and trained personnel. This MSDS completes the technical data sheets but does not supersede them. The information given herein is based on extent of our knowledge of the product on the publishing date. The information given herein is offered in good faith as accurate. Moreover, users should be aware of the possible hazard incurred when a product is used for any purpose other than its intended use. In no way it relieve the user from knowing and applying all texts governing his/her activity. It is the user's sole responsibility to take the necessary precautions associated with the use of the product. All of the regulatory provisions mentioned are provided to assist the end-user in fulfilling his/her obligations when using a danger product. This list must not be considered as exhaustive. It does not stop the user from making sure that he/she complies with the written obligations other than those previously cited and which rule the fact of keeping and using the product for which hs/she is the sole responsible person.