

DIRECTA

ESSENTIALS FOR INDUSTRY

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DIRECTA (UK) LTD

TECHNICAL DATA SHEET:

PRODUCT: Our Reference No. 030

DESCRIPTION: P.T.F.E Threadseal Tape

TECHNICAL DETAILS: Conforms to BS 7786 1995 grade L and one wrap will therefore give a gas-tight seal to 29 bar (430 lbf/in sq.) on a quarter inch BS 21 tapered brass thread in combination with a parallel collar. With different materials, pipe diameters or thread types two or more wraps may be necessary and the pressure pass level may change.

DOES CONTAIN HYDROCARBON:

Widths:	12mm, 25mm
Length:	12 metres
Tape Thickness:	0.075 mm
Temperature:	Up to 250 deg. C
Colour:	White

CAUTION: PTFE in any product is completely stable up to 250 deg. C. Decomposition begins to occur, slowly, above 250 deg. C and remains slow at temperatures below 400 deg. C. At temperatures above 400 deg. C the speed of decomposition increases. Care should be taken to avoid contact with naked flames, particularly in enclosed areas as the resultant fumes can cause temporary flu-like symptoms.

Except where indicated otherwise, the above figures are average values and should not be regarded as maximum values for specification purposes. The company reserve the right to improve products and change specifications which may alter the performance. We advise the customer to test the material required to ensure the suitability of intended application.

HEALTH AND SAFETY

Health Hazard Data: PRIMARY ROUTES OF POTENTIAL EXPOSURES:

Inhalation: The health risk from PTFE relates to the possible inhalation of decomposition products. At temperatures in excess of 260 deg. C the polymer will progressively decompose and give rise to a number of gases including tetrafluoroethylene (from 430 deg. C), hexafluoropropylene (from 440 deg. C) and perfluoroisobutylene (from 475 deg. C). In some

manufacturing operations involving extended exposure at 400 deg. C, carbonyl fluoride is known to be the main decomposition product which, in the presence of moist air is rapidly converted to the highly corrosive hydrogen fluoride. A complex particulate substance is also known to be formed from the decomposition of PTFE at temperatures above 350 deg. C which is thought to be the cause, if inhaled, of the development of a characteristic syndrome with influenza-type features (fume fever). The latter usually manifests itself within a few hours of exposure but the characteristics usually subside within 48 hours with no after-effects. Some of the products from higher temperature decompositions of PTFE (e.g. perfluoroisobutylene) are highly toxic.

Skin Contact: No skin problems should arise from the handling of the Directa PTFE containing products referred to above but good occupational hygiene practices should be observed when such materials are being handled. The possible contamination of tobacco with PTFE should be avoided as smoking is then a possible cause of the fume fever referred to above.

This information is based on current knowledge and experience. Its purpose is to describe our tapes in terms of Health and Safety requirements and should not be treated as a specification.

Carcinogenicity: PTFE has not been classified by the International Agency for Research on Cancer and does not appear in the list of substances cited in the US Fourth Annual Report on Carcinogens (Summary 1985) under the headings "Substances known to be carcinogenic" or "Substances that may reasonably be anticipated to be carcinogenic".

Occupational: Exposure Limits In the ACGIH booklet, reference is made in Appendix B to PTFE decomposition products. Although it is recognised that such products decompose in part by hydrolysis in alkaline solution and can therefore be quantitatively determined in air as a fluoride to provide an index of exposure, no TLV is recommended pending the determination of the actual toxicity of the products. However it is stated that the air concentration should be minimal.

Fire & Explosion: Hazards PTFE is basically non-flammable. (It has a Limiting Oxygen Index of 95). If a flame is applied to the surface of PTFE it will ignite because of the formation of gaseous decomposition products but combustion ceases when the flame source is removed. In a sustained fire involving PTFE products, firefighters must wear approved forms of breathing apparatus.

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