VDB Benelux

MMT® METAL MARKING TAPE

Technical Data Sheet Series 48

Developed voor pipe-lines

Effective Date: 2009-10-23
TDS VDB-3M-MMTSCT-4881

Application: High and low temperature, UV-resistant overlaminated printed pipemarking label.

Description: VDB-3M-MMTSCT-80 is a 3-ply laminated film. The aluminium carrier is overlaminated with a printed white film and extra protected by a clear UV-resistant film. The adhesive is a permanent, acrylic based, pressure sensitive adhesive.

Print: 3M UV-ink, 200% flexible, UV- and high temperature resistant.
Ink available in all PMS/ RAL colours.
No chlorides, no solvents, no toxins, no penetration in substrate and adhesive, environmentally friendly.

Adhesive: Excellent to low surface energy surfaces, metal, plastics and powder coatings.
Special acrylic adhesive for cold weather adhesion and slightly humid surfaces.
Excellent high temperature performance, non-inflammable.
No moisture penetration and a barrier against water and water vapour.
Excellent flexibility and resistance against ageing.
No chlorides.

Characteristic	Description
Film 3-ply	95µm (0,09mm), transparent 95µm (0,09mm), white 78µm (0,08mm), aluminium
Adhesive type carrier	25µm, acrylic, pressure sensitve, no chlorides
Covering	35µm (0,03mm) siliconized paper
Application subtrates	Glass, metal, paint, rigid plastic, carbon and film
Minimum application temperature	ca. -20°C
Service temperature range	ca. -40°C to ca. + 160°C
Tensile strength (min)	30 N/cm

Characteristic	Description
Applied shrinkage	< 0,2 mm
Elongation at break	10%
Adhesion stainless steel,	> 9,0 N/cm
Water vapour permeability	< 1g/m² x 24h
Flammability acc. to DIN 4102	B1
Shelf life	2 years after receipt from manufacturer, (dry conditions, temp. < 38°C max. 65% humidity)

VDB Benelux

MMT® METAL MARKING TAPE

Technical Data Sheet Series 48

Developed voor pipe-lines

Effective Date: 2009-10-23
TDS VDB-3M-MMTSCT-4881

Performance	Test	Results
High service temperature	Short term (30 min) at +190°C applied on stainless steel pipe	light discoloration
	Short term (1 h) at +170 °C applied on stainless steel pipe	no visible effect
	Long term (30 days) at +110°C applied on stainless steel pipe	no visible effect
Low service temperature	Long term (30 days) at -30°C applied on stainless steel pipe	no visible effect
Humidity resistance	Long term (30 days) humidity chamber	no visible effect
Weatherability	36 months in the field applied on stainless steel pipe	no visible effect no corrosion on stainless steel pipe
Chemical resistance	10 min. immersions in test fluid dry rubbed with micro fibre swab	Oil - no visible effect Gasoline - no visible effect Alcohol 50% - no visible effect Ethanol 50% - no visible effect Methanol 30% - no visible effect Natriumhypochloride 20% - no visible effect Acetone - no visible effect Sulfide acid 6% - no visible effect Ammonia 30% - no visible effect

Important notice:

This product is an advanced development product and is the result of fundamental research. Our products correspond to the latest technical standard. Please note that product compliance information is based upon information by suppliers of the raw materials used by VDB to manufacture this product or based on results of testing using recognized analytical methods performed by a third party, independent laboratory. Under labatory test conditions we cannot take into account all the relevant factors that can affect the use and performance of the tested product. Therefore, statements in this letter are based on our experience and may not have been verified with tests specific to the user´s application. Given the variety of factors, such as the materials to be bonded with the above mentioned products, the surface preparation, the conditions in which the product is used, some of which are uniquely within the user's knowledge and control, it is essential that the user determine the suitability of these products for the intended use and the user's method of application. Please read and ask for our application bullitins. All questions of liability relating to these products are governed by the terms of the sale subject, where applicable, to the prevailing law. VDB makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information.VDB warrents to the buyers that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the product shown to VDB's satisfaction to have been defective at the time VDB sold it. This warranty does not extend to any persons obtaining the product from the buyers.This warranty is in lieu of any other warranty, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and of any other obligations or liability on VDB's part. Under no circumstances will VDB be liable for any loss, damage, expense, or consequential damages of any kind arising in connection with the use, or inability to use, VDB's products.