Product Information
S/PA

Description

Tico S is a high performance machinery mounting material. It matches today's fast changing manufacturing environment, where ease of machine mounting and flexibility of plant layout are prime factors.

Tico S is manufactured from a blend of carefully selected cork particles and polychloroprene/ acrylonitrile elastomers.

This Technical Information Sheet provides the user with the following information:

- Dimensions
- Typical Properties
- Pad Static deflection for a given load
- Pad Natural frequency for a given load
- Isolation efficiency for given load and disturbing frequency

Dimensions

Code	Product	Standard Thickness (mm)		Standard Size (mm)
TICO S	Cork/Elastomer Pad	6 12.5 25		1200 x 50 1200 x 75 1200 x 100 1200 x 150 1200 x 600 1200 x 1200
Contact 'S'	General Purpose Adhesive	Area Coverage	3 m^2 15 m^2	1 lt can 5 lt can

Typical Properties

		Explanation
Recovery properties Immediately 1 minute 3 minutes 5 minutes 10 minutes 30 minutes	 96.1% 96.9% 97.7% 98.3% 98.5% 98.6%	A TICO Pad 150 mm square, 12.5 mm thick was compressed to 65% of original thickness under a static load of 1.05 MN/m^2 and on release exhibited these recovery characteristics.
Lateral flow (average) Load: 350 kN/m^2 1.05 MN/m^2	 0.46% 0.83%	A TICO Pad exhibited these flow characteristics under compression: Initial thickness: 12.5 mm Initial lateral dimension: 150 mm

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Typical Properties continued

Effect of heat ageing on compression and recovery A. Deflection of heat aged pad at (load): 210 kN/m^2 350 kN/m^2 700 kN/m^2 1.05 MN/m^2 B. Recovery of heat aged pad: After 5 minutes	 2.9% 8.3% 19.7% 31.4% 99.2%	TICO Pads of nominal dimensions 150 mm x 150 mm x 25 mm were aged for 90 days at 70°C in an air circulating oven. Micrometer measurements on recovery intervals established the percentage figures shown.
Tensile strength	> 2.1 MN/m^2	Tested in accordance with BS 903
Elongation at break	50 %	
Hardness	69 ± 5°	IRHD
Thermal conductivity	0.1 0.7	W/m°C Btu x in/ft^2 x h x °F
Young's Modulus	7.8	MPa
Poisson's ratio	0.06	
Damping factor	0.1	
Coefficient of friction	0.65 0.5	TICO to concrete TICO to bright mild steel
Temperature range	-40°C to +100°C	TICO S will operate satisfactorily over the indicated range and is suitable for both arctic and tropical climates.
Load bearing capacity Recommended maximum load	0.5 MN/m^2	TICO S will withstand very high dynamic and static loads without physical breakdown. In machinery mounting applications, the recommended maximum static load should not be exceeded without consultation.
Dimensional stability	TICO S material is dimensionally stable under widely varying atmospheric conditions.	
Electrical Resistance	7 x 10^{10} Ohms	Tico S tested at 1000V DC on a 12.5mm thick sample.

Typical Properties Continued

Chemical Resistance

EXPOSURE	TICO S/PA RESISTANCE	EXPOSURE	TICO S/PA RESISTANCE
Acetone	C	Methane	B
Acetic Acid	C	Methyl Ethyl Ketone	C
Air	A	Methylated Spirit	A
Amyl Acetate	D	Naphtha	C
Asphalt	C	Natural Gas	A
Benzene	C	Oils (Vegetable and Mineral)	A
Brine	B	Oxygen	A
Butane	B	Ozone	B
Butyl Alcohol	A	Paraffin	B
Borax (Sodium Borate)	A	Petroleum Spirit	B
Carbolic Acid	D	Pitch	C
Carbon Tetrachloride	D	Propane	B
Caustic Soda	B*	Stearic Acid	B
Citric Acid	A	Silver Nitrate	A
Detergent	B	Soap Solution	A
Diesel Oil	B	Sodium Chorate	B
Diethylene Glycol	A	Sulphonated Fatty Alcohols	D
Ethyl Alcohol	A	Tartaric Acid	A
Formaldehyde	B	Tallow	B
Glue	A	Tar	C
Glycerine	A	Turpentine	C
Isopropyl Alcohol	A	Tannic Acid	B
Kerosene	B	Vinegar	B
Lactic Acid	A	Water	B
Latex Solution	A	White Spirit	B
Lime Water	A	Whisky	A
Methyl Alcohol	B	Wines	A

* This rating is based on the type of exposure found in the food and beverage industries.

Explanation of code:

A	-	Excellent
B	-	Good
C	-	Suitable for splash conditions or intermittent contact
D	-	Unsuitable

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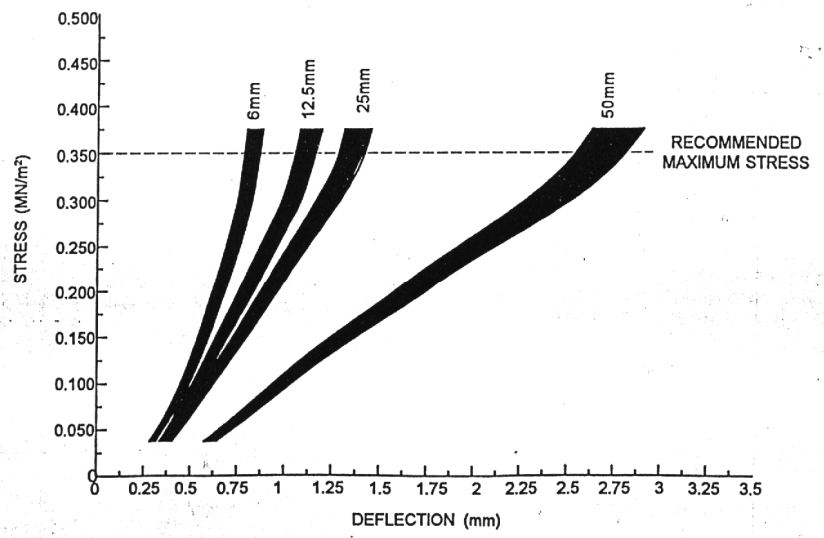
Static Deflection

To use graph:

1. Calculate Stress on pads in MN/m^2 using formula:

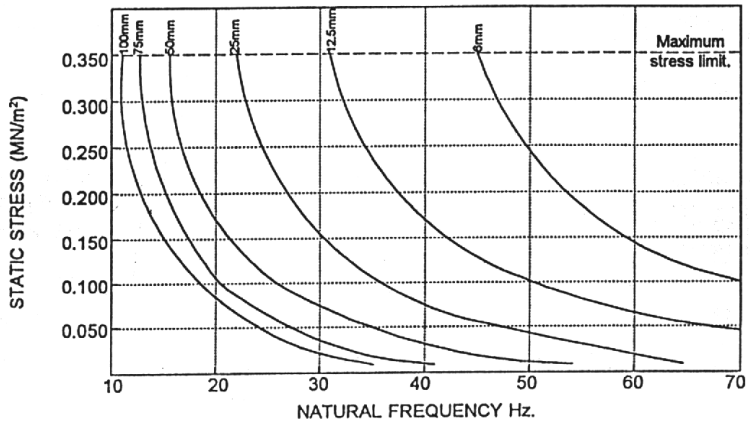
$$\text{Stress in } MN/m^2 = \frac{(\text{Weight of machine in kg} \times 9.81) \div 1{,}000{,}000}{\text{Area of pad in } m^2}$$

2. Project horizontal line from calculated stress to intercept desired thickness. Read deflection off horizontal axis of graph.



Natural Frequency of Pad

1. Calculate Stress on pad in MN/m^2.
2. Read from vertical axis across to desired pad thickness.
3. Read natural frequency (fn) off horizontal axis.



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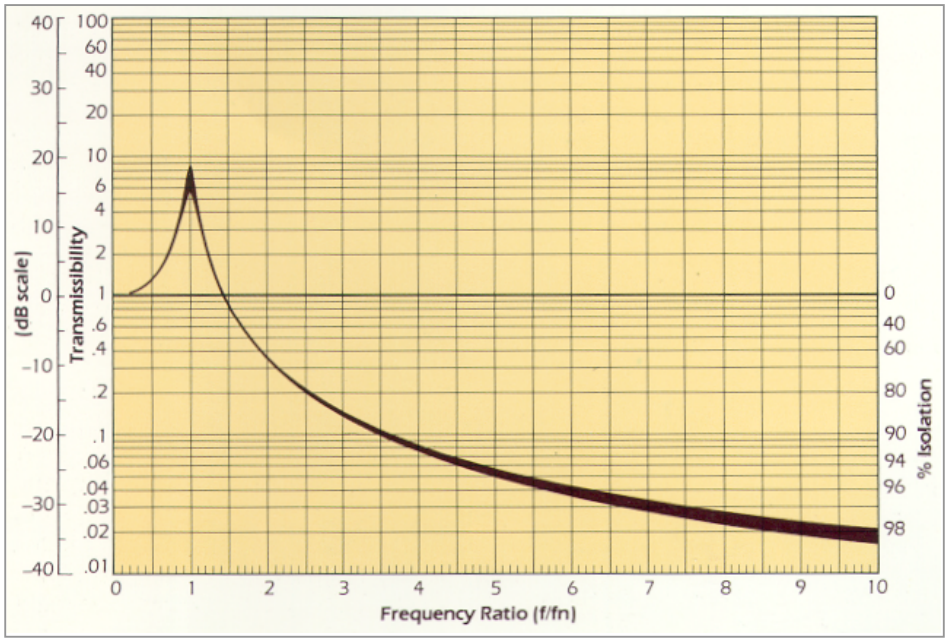
Isolation Efficiency

1. Ascertain disturbing frequency of plant to be isolated (fd)
2. Calculate frequency ratio fd ÷ fn
3. From horizontal axis project a line up to curve of graph and read off isolation efficiency from right-hand side vertical axis.



Note: - Installation should be arranged so that frequency ratio does not fall between 0.5 and 2.