Multi(tetra)-axial structures,Tetras, now open possibilities

Tetras, new leading technology of tetra axis construction improves the tear strength and dimensional stability of fabric in all directions. this sensational world's first mass-production multi tetra-axial loom was developed in 2000. Tetras, it's high quality and flexibility has unlimited potentiality in progressing society.

Tetras CHARACTERISTICS

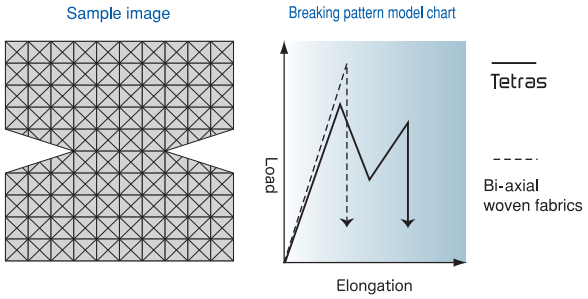
- Break in multi phase
- High tear resistance
- Dimensional stability
- High absorption and dispersion of stress
- Possibilities for any application with any material

Possibilities for any application with any material

Regular Fiber　Aramid Fiber　Glass Fiber　Carbon Fiber　Blend of Fibers

Unlimited Possibilities of Tetras featured by the comaprison with bi-axial woven fabric

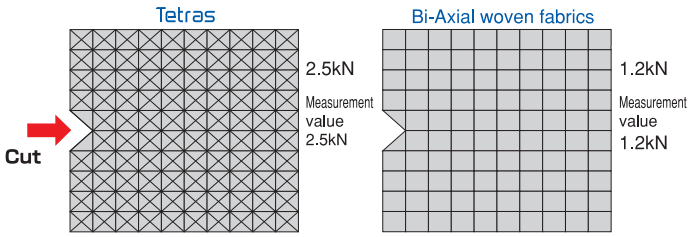
Breaking pattern model



Tetras is able to keep it's pattern under extraordinarily high destructive strain condition and break in multi phase though bi-axial woven fabric is broken easily. It shows the high impact resistance and safeness of Tetras.

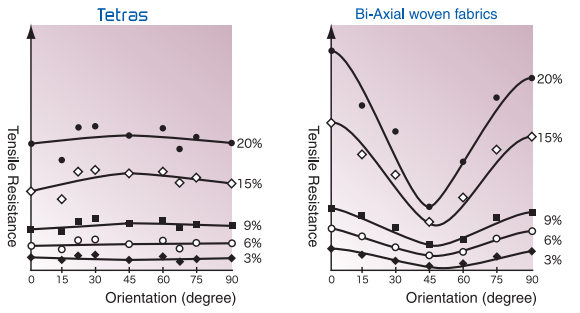
Tear resistance

- Composition of Tetras fabric/Nylon multi-filament1400dtex weight per unit area 286g/m^2
  Bi-Axial woven fabrics/Nylon multi-filament1400dtex weight per unit area 278g/m^2
- Examination method applies correspondingly to the JIS L 1096 C law (Torapezoid method).



Tear resistance of Tetras is over twice as strong as bi-axial woven fabric and it minimize the extension of damage.

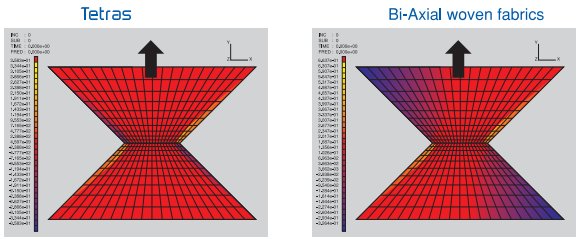
Dimentional stability



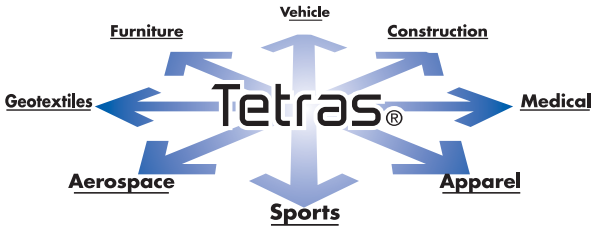
Tetras is stable against force from any direction.

Bi-axial fabric is unstable with diagonal force.

Stress analysis of laminated fabric



Bi-axial woven fabric shows minus shear stress in diagonal direction and plus in other direction. Large gap of stress causes the deformation,flaking,curve,wrinkle and break. Shear stress of Tetras is stable in all direction and fabric is dimentionally stable.



Tetras products at present and in the future

Tetras enables combination of many materials and it is adopted in variety of ndustrial applications such as tennis rackets,shafts of golf club and other sports field at present. In the future, we expect to develop new market place, such as, Aerospace, Vehicle, Apparel, Medical, Welfare, Construction and Furniture. Tetras is a dream fabric.

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