

Notes_On_Flat_Proofing_Tires_1998.txt

Subject: Notes on flat proofing
sent: 2 Aug 98

Pre-formed flat proof tires, and tire-wheel assemblies: American Tire Corporation provides Urethane flat proof tires and/or tire-wheel assemblies. The Urethane tires would work on a variety of sizes to include bicycles and steel wheels. Low density foam push carts Urethane tires ride like a 15 psi pneumatic tire and cost about \$4/each up to 26x1.95. High density foam mountain bike Urethane tires are able to work at road speeds have a 40 psi equivalence and cost from \$8 to \$12/tire. Police bicycle tires with a 90 psi equivalence have also been made. For proper sizing need to identify one of the three different types. Describe whether it is aluminum or steel rim, USA made (26.7 mm wide), Italian made, or Europe made (19.2 mm wide). J&B in Florida and Western Auto is biggest retailer of this product. Call 800-808-1268 for more info or see:

<http://www.americantireco.com/>

Cell-tight foam inter tubes: Some WalMarts have a intertube shaped ring filled with cell tight foam that sells for use in existing bicycle tires for most sizes. The products name is called "No-Morflats". Cost is \$16.95-21.95/each depending on size. Product is made by Cyclo Manufacturing Co., 1438 S. Cherokee St. Denver, Colorado 80223, phone# 303-744-8043.

Flat proof by use of liquid Urethane rubber: Turner & Black Corporation, 650 W. Main Street, Wytheville, VA 24382, Phone # 1-800-637-4492 has a 25 year old Urethane rubber tire filling process. Adds weight to the tire of about 8.4 lb/gal of air space displaced. The process does not foam. The process takes a special liquid pump (Greco costs \$2,500 used to \$7,500 new) and is not a process for the casual user. If you are close to Virginia USA, tires can be shipped to get filled. Commonly, tractor tires use this process. See:

<http://www.symweb.com/turnerblack/>

Synair Corporation makes the polyurethane rubber filling compound for flat-proofing tires. See: http://www.synair.com/fltprf_ind/index.html

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Sealants: Available at most car or automotive parts companies. see:
http://www.yahoo.com.sg/Business_and_Economy/Companies/Automotive/Parts/Tires/Sealant/

Technology notes: New flat free tires that will be sold in the near future for cars will be able to drive for 50 miles at a speed of 55 miles/hr after the tire goes flat. Has a special rubber textile sandwich in the sidewall of the tire that supports the vehicle even without air pressure. See:

Converting to run-flat tires relieves pressure to change

<http://167.8.29.16/money/consumer/autos/mauto351.htm>

Current thoughts and strategy on the subject: First, replace or Urethane fill existing pneumatic air type tires planned to be used after PS. Second, have some liquid Sealant or Urethane foam available for those tires that show up in your vicinity for you to repair after PS. Keep an eye on the new flat free car tires to see if at lower speeds and lighter loads as in a hand pull cart they would work after PS for an extended time. If buying new tires for push carts look for the flat free type tire-assemblies like American Tire Corporation has for sale. In general, buying it flat free to start with, seems to be cheaper than making it flat free after purchasing. Best products/procedures are yet to be determined.

subject: bicycle tires

Sent : 3 Dec 97

All our priorities should be: reliability first

I believe the approach of making a puncture proof hard tire out of a tube type could be reliable alternative only surpassed by a solid rubber tire. On this, I don't have a recommendation at this time, It is a research item. I had planned to e-mail several liquid foam manufactures and ask what they recommend. This

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could be done by any volunteer. I was planning to say something like.

"I am part of an Internet group looking for a liquid that can be pumped into tube type bicycle type tires that will foam into a flexible dense closed cell type rubbery foam. Should fill the entire tire and seal the tire from damage due to small cuts, thorns, and make the tire act somewhat similar to a solid rubber tire, yet minimize to some extent added mass. The use would be to minimize maintenance and prolong the tire life for push and pull carts used in rough primitive outdoor environments. What product would you recommend?"

Note: The following reference has some interesting information about patching bicycle tires.

<http://muffet.com/bikes/faq.html>