ATZ Antimicrobial Toxicity Data

ORAL

Acute Oral Toxicity

Undiluted ATZ touch has an extremely low acute oral toxicity (LD50 = 12.27 gm/kg body weight) and therefore should pose no hazard from ingestion incidental to industrial handling.

ATZ touch has extremely a low acute oral toxicity. There should be no problem from ingestion incidental to industrial handling. If large quantities are ingested accidentally or willfully, the likelihood of injury is remote.

EYE

2% Aqueous Antimicrobial (1% Solids)

The subject material has a slight effect upon the eye viz. transient irritation of the conjunctival membranes and a very slight corneal response, which should heal completely within a short while. Precautions should be taken to prevent contact with eyes.

SKIN

Skin Contact - Absorption

Based on the results of the skin irritation study, ATZ touch does not appear to be absorbed through the skin in acutely toxic amounts. None was detected in tissues of animals treated dermally. The results showed that the absorption of ATZ touch through the skin of the animals was essentially zero. The potential hazard of the use of this antimicrobial in contact with the skin is, therefore, considered to be insignificant.

Skin Contact - Irritation

Both aqueous dilutions of the ATZ touch have essentially no effect upon the intact or abraded skin. At most, this may produce a slight scaling after repeated, prolonged contact. Reasonable care and cleanliness should avert any significant response.

32-Day Human Wear Test with Socks Treated with Antimicrobial

Various socks materials (wool, cotton, nylon,) were treated with ATZ touch at 0.35% owf (on weight of fiber) for safety evaluations of skin irritation and skin sensitization properties. ATZ touch treated socks were evaluated on 23 male subjects for a total of 32 continuous days. The results of the investigation showed the ATZ touch treated socks to be free from any observable skin irritation or skin sensitization.

This study employed a fabric (non-woven polyester) treated with ATZ touch at 0.5%, w/w, 5% w/w, and no treatment (used as a control).

Approximately 60 square inches of fabric were allowed to contact the shaved back and abdomen of the animals for 6 hours per day, 5 days per week for 4 weeks (20 applications). The skin of each animal was pre-moistened with normal saline to simulate perspiration. After the 6-hour contact period, the fabrics were removed, rinsed with tap water and patted dry.

The results of this study indicate that no significant untoward alterations were noted with ATZ touch in regard to mortality, reactions, effects on body weight, hematologic and clinical

blood chemistry studies, urine analysis or gross and microscopic pathologic examinations among any of the test animals.

Three-Month Wear Test for Treated Athletic Socks with ATZ touch
Various socks materials (wool, cotton, nylon,) were treated with ATZ touch at 0.35% owf (on weight of fiber) for safety evaluation of potential hazards to skin under normal wear conditions. The ATZ touch treated socks were evaluated for skin irritating and skin sensitizing properties on 44 young male subjects for an entire football season (approximately 90 continuous days).
The results of the investigation showed the male subjects to be free from any observable skin irritation or skin sensitization at the end of the test period.

INTRAVENOUS
Radiolabeled C^{14}
ATZ touch (C^{14}) was administered by a single intravenous dose. Urine and faeces were collected at 24-hour intervals and tissue concentration of radioactivity was determined at the end of the ten day study period. Elimination of C14 after parenteral administration was slow and occurred by both urine and faeces (13.5% in the urine; 20% in faeces). Tissue concentrations of C14 were highest in the liver, lung and kidneys after IV administration.

Acute Vapor Inhalation Toxicity Study
The acute four-hour vapor inhalation LC50 for ATZ touch is greater than 81.9 mg/liter.