Dermatest Pty Ltd

Test Protocol Outline

Corrositex®: In-Vitro Corrosivity Test for Transport - Class 8

Determines chemical corrosivity and permits assignment of Packing Group classification for Class 8 corrosives. This test replaces the rabbit test of dermal corrosivity by providing a reliable means of mimicking this test. U.N. Packing Group classification can be determined or marketing claims substantiated.

Experimental Design

The proprietary core technology of the **Corrositex** test is based on a biomembrane and chemical detection system.

A proprietary bio-barrier membrane is penetrated by the sample, thus mimicing the effect of corrosives on living skin. As the corrosive sample destroys this bio-barrier, the fluid below changes color or texture. This time for these changes to occur is determined and related to previously determined pH behaviour.

Method

Step 1: Qualification
The sample is first screened to determine suitability for the test.

Step 2: Categorisation
Small aliquots of the test sample are placed into the **Corrositex** categorising testing system. The colour change gives the category assignment - Category I or II.

Step 3: Classification
Small aliquots of the test sample are placed into the **Corrositex** biobarrier system . This consists of a glass vial filled with a chemical detection fluid capped by a freshly prepared proprietary bio-barrier membrane. The membrane is designed to mimic the effect of corrosives on living skin. As soon as the corrosive sample destroys this bio-barrier, the fluid below changes color or texture. The time taken for penetration through the membrane is determined.

Step 4: Assignment The appropriate U.N. Packing Group classification can now be assigned...

Category	**Time Required for CDS changes (minutes)**			
Category 1	0 to 3 min	>3 to 60 min	>60 to 240 min	>240 min
Category 2	0 to 3 min	>3 to 30 min	>30 to 60 min	>60 min
Packaging Group	I	II	III	Non-corrosive

Recognitions
Department of Transportation - DOT-E 10904
Consumer Product Safety Commission (CPSC)
European Centre for the Validation of Alternative Methods (ECVAM)
EPA Federal Register / Vol. 60, No. 142 Dermal Corrosion
Food & Drug Administration (FDA)
International Air Transportation Association (IATA)
National Institute of Environmental Health Sciences (NIEHS)
Occupational Safety and Health Administration (OSHA)
Transport Canada - Permit For Equivalent Level of Safety SU 4483
A full list of specific references is available on request.

References
In-vitro Corrositex Reference Manual DOT - E 10904