Product Toxicity Summary Sheet

Form 18594 - G - PWO

#17950+17953

Pg. 1

3M

Product Name	Issue Date
3M Scotchmark™ Brand Carbonless Paper	February 1991

Below is a summary of the study data giving an indication of the relative toxicity of the product. (Definitions of test procedures are found on the reverse side of this sheet.) This summary is the data for the precautionary use information provided with the product.

Relative toxicity of a material is only one factor that is important in determining the degree of hazard in handling a chemical or product. Other considerations to include are physical properties of the chemical, extent and frequency of use or exposure, intended use, and possible misuse of the product. For additional information regarding safe handling of the product, please reference the Material or Product Safety Data Sheet.

HUMAN REPEATED INSULT PATCH TESTS: Non-irritating and Non-Sensitizing. Imaged and unimaged coated front and back sheets of 3M Scotchmark™ Brand Carbonless Paper were individually applied to sites on the skin of the backs of over 200 human volunteers and left in place for 24 hours. Nine such applications were made to the same sites over a three-week period. Following a 2-week rest period, paper samples were applied to naive skin sites adjacent to the previously treated sites and left in place for 24 hours. Skin test sites were examined just prior to each application and 48 and 96 hours following the last application. One subject exhibited severe erythema (redness) at the examination prior to the 9th application of the imaged coated back sample. Scores at all other examination times for this subject and all of the other subjects were 0.0. Based on these results, it is concluded that the potential of 3M Scotchmark™ Brand Carbonless Paper to cause allergic contact dermatitis or dermal irritation is very low. (T-5282, T-5283, T-5284, T-5285)

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(PTSS101-SMARKCP)

3M Carbonless Products Department

Test Descriptions

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Below are described the toxicity studies commonly used in testing 3M products. The tests are normally conducted according to standard OECD (Organization for Economic Cooperation and Development) or FHSA (USA Federal Hazardous Substances Act) test guidelines or modifications of these protocc

LD_{50} - the dose lethal to 50% of the exposed animals. Dosage is expressed in grams, milligrams or milliliters per kilogram of animal body weight.

LC_{50} - the airborne concentration lethal to 50% of the exposed animals. Dosage is expressed in parts per million (ppm) by volume or milligrams per liter (mg/l) of chamber concentration for a stated period of time.

1. **Acute Oral** - refers to a test of a single dose of a product; a specified weight or volume per kilogram of body weight is administered orally to albino rabbits. There is a 14-day observation period following dosing. The product is classified for oral toxicity according to the system of Hodge and Sterner (classified on basis of oral LD_{50} in mg/kg): Extremely toxic: 1 mg or less; Highly toxic: 1 to 50 mg; Moderately toxic: 50 to 500 mg; Slightly toxic: 500 mg to 5 gms; Practically non-toxic: 5 to 15 gms; Relatively harmless: >15 gms.

2. **Acute Dermal** - refers to a test of a single dose of a product; a specified weight or volume per kilogram of body weight is administered by continuous contact for 24 hours with the bare skin of albino rabbits. There is a 14-day post-administration observation period. A descriptive rating of the dermal toxicological properties (i.e., American National Standards Institute, USA Federal Hazardous Substances Act, Hodge-Sterner or European Economic Community toxicity classification) is assigned to the product.

3. **Acute Inhalation** - refers to a test of a single continuous inhalation exposure of a specific concentration of a product for a given period of time. A descriptive rating of the inhalation toxicological properties (i.e., American National Standards Institute, USA Federal Hazardous Substances Act, Hodge-Sterner or European Economic Community toxicity classification) is assigned to the product.

4. **Primary Skin Irritation** - refers to a test of single dermal application of 0.5 gram or 0.5 milliliter of a product to albino rabbits. Either the OECD or the FHSA test guideline is employed. In the OECD test method the sample is applied to intact skin test sites of three or more animals, semi-occluded, and held in contact for 4 hours. Observations are made at 4, 24, 48 and 72 hours post-application. In the FHSA test method the sample is applied to both intact and abraded skin test sites of six animals, occluded, and held in contact for 24 hours. Observations are made at 24 and 72 hours. Scoring for dermal irritation in both test methods is according to the procedure of Draize.

   One of the following descriptive ratings is assigned to the product: non-irritating, minimally irritating, slightly irritating, mildly irritating, moderately irritating, severely irritating or extremely irritating.

5. **Eye Irritation** - refers to a test of a single application of 0.1 gram or 0.1 milliliter of a product into the conjunctival sac of the eye of the test animals (usually albino rabbits). Either the OECD or FHSA test guideline is employed. In the OECD test method three animals are normally used with the eyes observed at 1, 24, 48 and 72 hours. In the FHSA procedure six animals are used with observations at 24 and 72 hours post-application. Additional observations or evaluation times may be added. Scoring for eye irritation in both protocols is according to the procedure of Draize.

   One of the following descriptive ratings is assigned to the product: non-irritating, practically non-irritating, minimally irritating, mildly irritating, moderately irritating, severely irritating or extremely irritating.

Other tests including dermal sensitization studies (guinea pigs), human patch tests, in vitro mutagenicity tests and sub-acute or chronic toxicity tests may be conducted and summarized on the Product Toxicity Summary Sheet.