Plasticizers
Biphenyl

Technical Bulletin O-D-700

RECEIVED
MAY 8 1972
MONSANTO COMPANY
INFORMATION CENTER
ST. LOUIS

ORTHO-NITROBIPHENYL

TOXICITY DATA

DEVELOPMENT DEPARTMENT
ORGANIC CHEMICALS DIVISION
MONSANTO CHEMICAL COMPANY
ST. LOUIS, MISSOURI

0614282

TOWOLDMON0038454

ORTHO-NITROBIPHENYL

GENERAL STATEMENT

The following data pertaining to the toxicity of Ortho-Nitrobiphenyl are based on reports received from reliable sources but the data are, as yet, unpublished. Tests on rats and rabbits, as experimental animals, show that Ortho-Nitrobiphenyl is toxic to the following extent:

The single lethal oral dose (LD_{50}) administered as a 25% solution in olive oil is 1.25 grams per kilogram for rats and 1.58 grams per kilogram for rabbits. The method of preparing the compound for administration has a marked influence on the rate and extent of its absorption. When administered in a 30% suspension in 1.5% acqueous methyl cellulose, the LD_{50} per single dose is 4.1 grams per kilogram for rabbits.

0614283

TOWOLDMON0038455

EFFECT ON THE SKIN

Repeated application of Ortho-Nitrobiphenyl (as a 25% solution in olive oil) to the abdominal skin of rabbits induces no signs of local irritation nor does it appear to cause systemic illness.

Ortho-Nitrobiphenyl as shown by patch testing according to the procedure outlined by the United States Public Health Service, is not a primary skin irritant or a sensitizing agent, using a 5% solution of Ortho-Nitrobiphenyl in Acetone.

Patch tests were carried out on a group of 200 individuals and no positive reactions occurred.

INHALATION

Inhalation experiments indicate that vaporized Ortho-Nitrobiphenyl in a concentration of .3 milligrams per liter of air produces systemic effects in rabbits. This concentration is not considered safe, and the maximum safe concentration is presumably considerably below this level but has not been determined. Repeated exposure to dust containing .03 to .05 milligrams of Ortho-Nitrobiphenyl per liter of air produced no toxic results.

0614284

TOWOLDMON0038456

SUGGESTED INTERPRETATION

The ingestion of Ortho-Nitrobiphenyl of the inhalation of vapor, mist or dust must be avoided through proper engineering and safety measures incident to good housekeeping. Finished formulations which may be doubtful as to their ultimate application should be tested and contact with food or other possible avenues of ingestion should be avoided unless properly designed tests prove that such an application is safe.

Each new use requires careful consideration not only of the product but its use and conditions of use. The inherent properties of Ortho-Nitrobiphenyl indicate that it is worthy of serious consideration.

In the event that this statement does not cover a particular case, we shall be glad to expand upon it in detail upon request and within the limitation of the available data.

LAW 445

0614285

TOWOLDMON0038457

The data set out herein is from reports received by us. We believe in the competency of the investigators but interpretation and a proper use of toxicological data to suit not only the product but a given set of conditions are essential and must be made by you.

The presentation of this data, therefore, is intended to be helpful, but from the standpoint that we cannot know all conditions of possible applications, the ultimate use involving interpretation of the data must remain with you and it must be understood that although Monsanto will stand behind the data set out herein, Monsanto does not assume responsibility for any loss, damage or accident resulting from the use of this product or products made with it.

Monsanto Chemical Company
Organic Chemicals Division
St. Louis, Missouri

TOWOLDMON0038458