

author's point initially, but with benthal/aqueous systems also being discussed.

Hazardous chemicals and oil in the environment are treated throughout the book, under appropriate models, especially in the problems that are supposed to be worked by the student. Examples include:

1. Runoff contamination from organic pesticides.
2. Cumene partitioning between water and oil slick phases.
3. Dispersion of heavy fuel oil on sea surfaces.

Two chapters of particular importance in chemical spills are 4 and 5, dealing with exchange rates between air and water, and forced convection dissolution in streams. The applications include, of course, rate of evaporation of volatile chemicals (chloroform) and the dissolution rates of spilled heavier-than-water chemicals (PCB) into flowing streams.

Based on extensive research work by the author over the past several years, this book represents a major step forward in the application of modern chemical engineering principles of transport phenomena to environmental models. The methods presented will yield a much more rigorous approach to the determination of spill impact, effects and fate.

G.F. BENNETT

Handbook of Industrial Toxicology, by E.R. Plunkett, Chemical Publishing Co. Inc., New York, 1976, US\$ 36.00, 552 pages.

There are several books available to emergency response personnel or others who are routinely dealing with hazardous materials, that contain similar information on the toxicity of chemicals, but no one book contains everything one would like to know when confronted by a new, unusual or dangerous substance.

The asset of this book is the toxicity data given for approximately 1200 chemicals. For example, for acetaldehyde the following is reported:

Acetaldehyde — Toxicology

Route of Entry: Ingestion, inhalation.

Mode of action: Local irritant. Central nervous system depressant. Fatty degeneration of liver and kidneys.

Signs and Symptoms: Irritation of eyes and nose. Headache. Bronchitis.

Pulmonary edema. Dermatitis. Albuminuria. Chronic intoxication resembles that of chronic alcoholism.

Diagnostic Tests: None established.

Treatment: Irrigate eyes with water. Wash contaminated areas of body with soap and water. Gastric leverage, if ingested, followed by catharsis. Symptomatic and supportive.

Additional data reported for most chemicals included: (a) synonyms, (b) description of occupational exposure, (c) TLV (in both ppm and mg/m³), (d) preventive measures and (e) bibliographic footnotes of good general review articles where available. Not given, however, were chemical formulas (which are readily available in Sax's *Dangerous Properties of Industrial Materials*), flammable hazard potential (which is covered by the *National Fire Protection Association Handbook*), and what to do with spills and leaks (available in abbreviated form in the *Toxic and Hazardous Industrial Chemical Safety Manual*). So what is not there is not critical to the holder of a good library and, as the foregoing abbreviated, annotated bibliography notes, one needs to have several books on hand.

There is an extensive appendix including (a) contents of an emergency kit for treatment of certain cyanide compounds, (b) treatment of methemoglobinemia, (c) preparation of a fat biopsy, (d) table of limits of TLV values for chemical substances in the workroom as adopted by ACHIH in 1974, and notice of intended change in same; and AICGH limit values for exposure to physical agents such as heat stress, laser beams, noise and UV radiation.

The last 28 pages are a report on the ILO-U/C International Classification of Radiographs of Pneumoconiosis.

Three pages of bibliography and a comprehensive index complete the book.

GARY F. BENNETT

Handling Chemicals Safely, Dutch Association of Safety Experts, Dutch Chemical Industry Association and Dutch Safety Institute, 1980, Dfl. 90.

This book, published in English, describes many of the properties of more than 800 chemicals arranged in alphabetical order using a 'Tremcard' type of format. For most chemicals physical properties and reactivity are summarised, together with details of hazards/symptoms, preventative measures, fire extinguishing agents, first aid advice, how to handle spillages, how to store and package labelling requirements (including UN number).

A useful introductory section covers in general terms first aid, personal protection aids, hazardous reactions, labelling in the EEC and various classification procedures.

The book is well produced with soft cloth covers and will be of considerable value to all who are likely to become involved with hazardous chemicals. It is highly recommended. Wide distribution would be very desirable, but at present it seems to be available only via the AMRO Bank in Amsterdam. If ordering make your remittance payable to account "Het Veiligheidsinstituut" and mention the title of the book.

F.S. FEATES