

Book Reviews *

Bretherick's Handbook of Reactive Chemical Hazards, 7th edition.

Edited by P. G. Urben. Academic Press: Oxford. 2007. 2 Volumes, Volume 1: 282 pp, Volume 2: 446 pp. £119. Set: ISBN-13 978-0-12-372563-9, ISBN-10 0-12-372563-1. Volume 1: ISBN-13 978-0-12-373945-2, ISBN-10 0-12-373945-4. Volume 2: ISBN-13 978-0-12-373946-9, ISBN-10 0-12-373946-2.

Bretherick's Handbook of Reactive Chemical Hazards should be well-known to all practising chemists and to all chemists and chemical engineers involved in carrying out chemistry at lab or plant scale. This 7th edition is in the same format as previous editions consisting of two volumes. Volume 1 contains the individual compound entries listed by molecular formula. Volume 2 lists the same compounds/incidents covered in volume 1 by class, group, or topic. For example, volume 2 includes topics such as "Adiabatic Calorimetry", groups such as "Agitation Incidents", and classes such as Grignard reagents. Thus, if a particular compound under investigation is not listed in volume 1, it is easy to check volume 2 to find out if an analogous or closely related compound is listed. Even then, there is no guarantee of safety, and it is well to heed the editor's advice: "But, reader, the ultimate responsibility for your safety remains with you: study, think and experiment with caution while doubt remains. And, should you thus find new hazard, please report it."

The total number of compounds listed in Volume 1 has actually decreased from 4929 in the 6th edition to 4923 in this 7th edition, although the number of pages covering this section has increased from 1926 in the 6th edition to 2014 in this edition. Some compounds do not automatically gain entry such as novel compounds proposed as explosives, and there is some selectivity involved in the selection of, for example, azides and perchlorates (organic or organometallic). Materials of this type only gain entry if they are either exceptionally sensitive or proposed as synthetic reagents. The theoretical side of chemical reactive hazards is covered selectively rather than exhaustively. Leslie Bretherick, the original compiler, died in 2003, but it is tribute to his efforts that he is still responsible for the initial selection of more than 70% of the compound and group entries.

Bretherick's Handbook, or simply Bretherick as it is known to many chemists, is not something that requires any further discussion; it is an essential, almost mandatory, requirement for all chemical labs, kilo-labs, pilot plants, etc.

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