New Bromine Complexing Agents for Bromide Based Batteries

Magnes Ben-Zion¹, Iris Ben-David², Eli Lancry³ and Mira Freiberg⁴

ICL-IP LTD

Menahem Kreutser 12 Beer-Sheva 84101 Israel

Abstract:

Bromine is a very good electro active species, with fast reversible kinetics. In addition it possesses a high vapor pressure and reactivity which require stabilization via complexing agents, which reduce reactivity and vapor pressure without changing its electrochemical properties.

Currently, bromide based batteries like the Zinc/ Bromine cell, use as Bromide complexing agents, either Methyl Ethyl Morpholinium Bromide (MEM) or Methyl Ethyl Pyrrolidinium Bromide (MEP) or their mixture.

Both complexing agents have been well known in the field for about 40 years.

A possible drawback of their use as complexing agents for bromine is that they are not always compatible with different bromide chemistries.

ICL-IP has developed a family of new effective Bromide complexing agents that are compatible with various bromide based chemistries and applications.

- 1- mailto: benzionm@icl-ip.com +972-8-629-7011
- 2- mailto: <u>bendavidi@icl-ip.com</u> +972-8-629-7001
- 3- malto: <u>lancryeli@icl-ip.com</u> +972-8-629-7059
- 4- mailto: <u>freibergm@icl-ip.com</u> +972-8-629-7082