Statement from CoGDEM on Exemption of Leaded Oxygen Sensors for Industrial Gas Safety

CoGDEM, the Council for Gas Detection and Environmental Monitoring, is the UK Trade Association for industrial and domestic gas safety. Membership includes 60 companies, including many manufacturers of gas sensors, gas detector instrumentation, domestic CO alarms and flue gas analysers. CoGDEM was founded 48 years ago and continues to represent most of the major manufacturers of oxygen sensors and industrial gas monitoring instruments for industrial gas safety. CoGDEM represents the UK by its members on many IEC, ISO, CEN and ASTM standards committees for safety and performance standards in gas detection and is the main body for promoting standards and uptake of residential CO alarms in the UK .

The Final Report of the *Study to assess requests for renewal of 16 exemptions to Annex IV of Directive 2011/65/EU* has concluded that the exemption for Industrial Monitoring and Control Instruments (IMCI) will expire on July 21, 2025. The review of exemptions proposed by COCIR, and JBCE were analysed in detail; however, although medical applications, detecting ppb oxygen in liquid for corrosion and emission monitoring were considered in detail, but industrial gas safety was only mentioned indirectly. Industrial gas safety includes oil and gas drilling, refining and distribution, work in confined spaces and workplace safety- a significant industry affecting many aspects of the economy. , As a Trade Association, representing the majority of oxygen sensor manufacturers and gas detector manufacturers, CoGDEM wishes to state our position on the future of leaded oxygen sensors for new industrial safety gas detectors and flue gas analysers, and the continuing need for service consumables (replacement sensors) in legacy equipment.

Leaded galvanic oxygen sensors have advantages over both alternative anode materials (Zn, Bi, W, etc.) and potentiostatic (3-electrode) sensors: they have significantly lower and very stable zero (baseline) currents, are simple to implement and importantly for the gas safety industry, have decades of field use where they have proven to be reliable and have saved lives; their simpler construction in comparison to potentiostatic sensors has been a main reason for this reliability. The market is making progress towards viable lead-free alternatives to lead based oxygen sensors for industrial applications but without further detailed technical analysis it is likely that businesses are going to suffer and market acceptance/usability of detectors is going to be compromised if the exemption is lifted as planned in 2025. A further seven-year exemption is requested to ensure continuing best safe practice in the gas safety industry.

If the ROHS exemption for replacement sensors were to be lifted as recommended by the consultants then there are global implications. Europe represents about 25% of the global industrial gas safety market and there are thousands of gas detectors in Lower and Middle Income Countries (LMICs) where gas detectors are expected to be usable for many more years. If leaded oxygen sensors with 1, 2 or 3 year lifetime cannot be supplied then these gas detectors will either be unusable or may be used in an unsafe manner. CoGDEM recommends that leaded oxygen sensors can continue to be supplied to legacy gas detectors for at least another 7 years.

CoGDEM, representing several oxygen sensor manufacturers (City Technology, Alphasense, Scientific, Draeger, New Cosmos and Figaro) can also provide an estimate of the annual lead consumption for oxygen sensors used in the industrial gas safety and flue gas analyser markets. There are approximately two million sensors produced annually with an average of 10 grams of lead per sensor. Europe represents about 25% of the market. Thus the European consumption of lead for these industries is 5,000 kg p.a.

CoGDEM thanks you for your further consideration of your proposed decisions on the continuing exemption of leaded oxygen sensors for IMCI applications.

John Saffell, CoGDEM Chairman

CoGDEM, Unit 9, Knowl Piece Business Centre, Knowl Piece, Wilbury Way, Hitchin, Herts, SG4 0TY
T: +44 (0)1462 434322 *E: admin@cogdem.org.uk W: www.cogdem.org.uk*