

# GAS HAZARD DATA SHEET



## Recommended Alarm Levels For Fixed Detection Systems

Gas Type	First Alarm Level	Second Alarm Level (where applicable)	Third Alarm (Optional)
<b>Flammable (Pellistor/IR)</b>	10%	20%	40%
<b>Oxygen</b>	18.5%	19.5%	23%
<b>CO</b>	3ppm	55ppm	75ppm
<b>H<sub>2</sub>S</b>	5ppm	10pp	Optional
<b>SO<sub>2</sub></b>	2ppm	5ppm	Optional
<b>CL<sup>2</sup></b>	0.2ppm	0.5ppm	Optional
<b>NO<sub>2</sub></b>	3ppm	5ppm	Optional
<b>NO</b>	25ppm	50ppm	Optional
<b>HCN</b>	4ppm	7ppm	Optional
<b>NH<sub>3</sub></b>	25ppm	35ppm	Optional
<b>HCL</b>	1ppm	5ppm	Optional
<b>O<sub>3</sub></b>	0.1ppm	0.2ppm	Optional
<b>Infrared (CO<sub>2</sub>)</b>	3500ppm	4500ppm	Optional
<b>CH<sub>2</sub>O</b>	1ppm	2ppm	Optional
<b>BCL<sub>3</sub></b>	1ppm	5ppm	Optional
<b>C<sub>2</sub>H<sub>4</sub>O</b>	1ppm	5ppm	Optional
<b>HF</b>	1ppm	3ppm	Optional
<b>SiH<sub>4</sub></b>	0.5ppm	1ppm	Optional
<b>BCL<sub>3</sub></b>	1ppm	5ppm	Optional
<b>H<sub>2</sub></b>	500ppm	1000ppm	Optional
<b>N<sub>2</sub>O</b>	200ppm	300ppm	Optional

Note these alarm levels are used where clients do not state their own preferred alarm levels when commissioning systems.

\* Oxygen enrichment is also a hazard with a normal alarm point at 23%VV

\*\* The overload relates to typically the maximum gas level a sensor can tolerate before potential damage to the sensor

# GAS HAZARD DATA SHEET

The logo for OLIVER IGD, featuring the word 'OLIVER' in a bold, italicized, sans-serif font, followed by 'IGD' in a similar font, all contained within a black rectangular box with a white border.

## STANDARDS

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1988 (COSHH)

HEALTH AND SAFETY AT WORK ACT 1974

The requirements are:

- Assess the risks to health and what precautions are needed
- Introduce measures to prevent or control the risk
- Maintain equipment and observe procedures
- Monitor exposure of workers and carry out health surveillance
- Train employees about the risks and precautions

EH40 sets out OCCUPATIONAL EXPOSURE LEVELS in two categories.

**MAXIMUM EXPOSURE LEVELS**, MELs are for the more dangerous substances and exposure to materials with MELs should be as low as possible and certainly not above their MEL.

**OCCUPATIONAL EXPOSURE STANDARDS**, OESs for the less dangerous materials are the exposures, which can be viewed as safe, and employees can work in them day after day. EH40 lists OCCUPATIONAL EXPOSURE LIMITS (OELs) showing substances with MELs separately from those with OESs. The list gives LONG TERM (8 hour) EXPOSURE LIMITS (LTELs) applicable to exposure during a normal working day and SHORT TERM (15 minute) EXPOSURE LIMITS (STELs) applicable to occasional exposure to higher levels. (Where no 15-minute limit is given a level of three times the 8-hour limit is used).

# GAS HAZARD DATA SHEET

The logo for OLIVER IGD, featuring the company name in a bold, italicized, sans-serif font. 'OLIVER' is in white on a black background, and 'IGD' is in black on a white background, both enclosed in a black border.

The following data has been extracted from EH40/2005:

		<b>TWA (8 HR)</b>	<b>STEL (15 MIN)</b>
Ethylene oxide	C2H4O	5ppm	N/A
Formaldehyde	CH2O	2ppm	2ppm
Hydrogen Cyanide	HCN	N/A	10ppm
Oxygen	O2	N/A	N/A
Ammonia	NH3	25ppm	35ppm
Carbon dioxide	CO2	5000ppm	15000ppm
Carbon monoxide	CO	30ppm	200ppm
Chlorine	Cl2	N/A	0.5ppm
Hydrogen chloride	HCl	1ppm	5ppm
Hydrogen fluoride	HF	1.8ppm	3ppm
Hydrogen sulphide	H2S	5ppm	10ppm
Nitrogen dioxide	NO2	1ppm	5ppm
Nitric oxide	NO	100ppm	N/A
Ozone	O3	N/A	0.2ppm
Sulphur dioxide	SO2	1ppm	5ppm
Boron Trichloride	BCL3	1ppm	5ppm
Hydrogen	H2	N/A	N/A
Nitrous Oxide	N2O	100ppm	N/A
Silane	SiH4	0.5ppm	1ppm