SAFEAIR® SYSTEM

- **Easy to use**
- **Highly sensitive and selective**
- **Ideal for daily employee screening or leak detection**
- **Measure TWA exposure**
- **No calibration or laboratory analysis needed**

PART #	ANALYTE	THRESHOLD LEVEL	INTERFERENCES
382010	Ammonia	4.0 ppm•hr	Primary aliphatic amines
382021	Aniline	0.2 ppm•hr	Aromatic amines, MMH, H_4N_2
382001	Aromatic Isocyanates (TDI and MDI)	TDI: 5 ppb•hr MDI: 3.5 ppb•hr	Aromatic isocyanates, high conc. Hydrazine
382017	Carbon Dioxide	8,000 ppm•hr	Acid vapors
382012	Carbon Monoxide	7.0 ppm•hr	Alkenes, H_2, H_2S
382009	Chlorine	0.18 ppm•hr	Br_2, HCl, I_2
382003	Chlorine/Chlorine Dioxide	Cl_2: 0.18 ppm•hr ClO_2: 0.2 ppm•hr	Cl_2: Br_2, HCl, I_2 ClO_2: NO_2, high conc. O_3
382019	Dimethyl Amine	5.0 ppm•hr	R_2NH
382011	Formaldehyde	0.4 ppm•hr	Acrolein
382002	Hydrazine	8 ppb•hr	MMH, aromatic amines
382020	Hydrazine Dual-Level	Front: 8 ppb•hr Back: 4 ppb•hr	MMH, aromatic amines
382037	Hydrides	Arsine: 18 ppb•hr	Hg, stibine, other hydrides
		Diborane: 5 ppb•hr	Hg, stibine, other hydrides
		Phosphine: 5ppb•hr	Hg, stibine, other hydrides
382024	Hydrogen Chloride	2.0 ppm	None known
382015	Hydrogen Sulfide	2.0 ppm•hr	None known
382005	Mercury	Front: 0.25 mg/m^3•hr Back: 0.08 mg/m^3• hr	Strong oxidizers
382013	Nitrogen Dioxide	1.0 ppm•hr	Ozone
382004	Ozone	0.05 ppm•hr	H_2O_2, above 1ppm NO_2
382000	Phosgene	15 ppb•hr	$COBr_2$, CNCl, $ClCO_2$
382014	Sulfur Dioxide	0.2 ppm•hr	None known
382018	UDMH	Front: 30 ppb•hr Back: 10 ppb•hr	Aromatic diisocyanates

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Principle of Operations

The SafeAir badge provides an immediate visual indication when a specific chemical hazard is present. The sensor in the SafeAir badge is constructed from a coated indicator layer rather than impregnated paper, thus providing a homogeneous and stable color change. The badges are highly sensitive and selective to the targeted chemicals. A color change, in the form of an exclamation mark, warns the presence of the targeted hazard. The SafeAir system is a low cost chemical detector badge. The badge requires minimal training. There is no calibration, extra equipment or laboratory analysis required.

Multi-Purpose Badge

Often chemicals coexist in the same environment. The SafeAir chlorine/chlorine dioxide badge selectively indicates the presence of chlorine on the front side of the badges and chlorine dioxide on the back side. Indications may appear on both sides if both chemicals are present. Non-selective multi-purpose badges are available for TDI/MDI, hydrazine/monomethyl hydrazine and arsine/diborane/phosphine. Individual color comparators may be used to quantify the exposure of the specific chemical.

Dual Threshold Badge

The mercury and 1,1-dimethyl hydrazine badges provide the user with two independent threshold levels. The front of the badge indicates one threshold level while the back provides a second level. This unique feature allows the badge to be used as an inexpensive range finder.

Color Comparators

For higher resolution and wider range, the SafeAir badges can be used with the SafeAir color comparator. Slide the SafeAir badge with the exclamation point facing up into the color comparator and turn the wheel until the colors match. Read the exposure dose in the exposure dose window.

PART #	ANALYTE	RANGE
383011	Arsine	18 - 1000 ppb•hr
383009	Carbon Dioxide	1800 - 80000 ppm•hr
383010	Chlorine	0.03 - 3.0 ppm•hr
383002	Chloroformates	1.5 - 250 ppm•min
383014	Diborane	4.0 - 500 ppb•hr
383001	Hydrazine	4.5 - 300 ppb•hr
383008	Hydrogen Chloride STEL	2.0 - 26 ppm
383004	MMH	6 - 300 ppb•hr
383000	Phosgene	0.9 - 100 ppm•min
383007	Phosgene Ext. Range	0.9 - 450 ppm•min
383012	Phosphine	5.0 - 1000 ppb•hr
383005	TDI	2.5 - 700 ppb•hr
383003	UDMH	10 - 700 ppb•hr