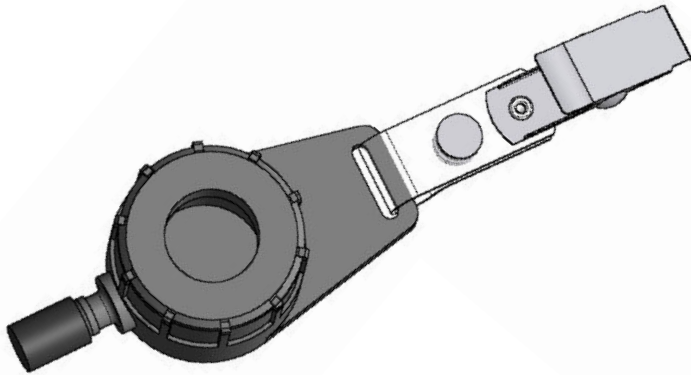


## Inhalable Dust Sampling Head



- Meets ACGIH and MDHS 14/3 requirements for inhalable particulate
- 50% cut point at 100 microns when used at 2 LPM
- Small (128 x 33 x 25 mm) including label clip
- Light weight (< 1 ounce or about 25 grams)

When operated at 2 LPM the Inhalable Dust sampling head collects a dust sample that follows the particle size distribution as described by the ACGIH for inhalable particulate. The ACGIH descriptions applied to particle size selective TLVs are presented below.

**Respirable Particulate Matter:** Those materials that are hazardous when deposited in the gas exchange region (50% cut point at 4 microns).

**Thoracic Particulate Matter:** Those materials that are hazardous when deposited anywhere within the lung airways and in the gas exchange region (50% cut point at 10 microns).

**Inhalable Particulate Matter:** Those materials that are hazardous when deposited anywhere in the respiratory tract (50% cut point at 100 microns).

The inhalable fraction size distribution is described by the following table. For particles of 1 micron diameter, nearly all (97%) are captured by the sampler and collected onto the filter. For particles of 100 microns in diameter, 50% are collected onto the filter. This approximates the size distribution in the respiratory tract.

**Inhalable Dust Sampling Head P/N: 811-9909-01**

**Inhalable Dust Cassette P/N: 811-9910-01**



The Inhalable Dust sampling head is assembled as above. A filter membrane is placed inside the cassette and the cassette cap is removed. The cassette seals against an o-ring inside the sampler body and attaches to the worker's shirt collar via the label clip. The sampler is attached to the sampling pump via the hose barb using flexible tubing of 1/4 inch ID. Airflow calibration is accomplished by placing the sampler inside a calibration jar. The full sampling method is described in MDHS 14/3.

Particle Aerodynamic Diameter (µm)	Inhalable Particulate Matter Fraction Collected (%)
0	100
1	97
2	94
5	87
10	77
20	65
30	58
40	54.5
50	52.5
100	50

Item	Part Number
Inhalable Dust Sampling head w/ 1 cassette	811-9909-01
Cassette with cap & transport clip	811-9910-01
Tubing, 1/4 ID x 3 feet	200484
Calibration Jar	7013376
Filter, MCEF, 0.8µm, 25mm 100/pk	GF25080
Filter, MCEF, 1.2µm, 25mm 100/pk	GF25120
Filter, MCEF, 5.0µm, 25mm 100/pk	GF25500
Filter, PVC, 5.0µm, 25mm 100/pk	GF25500PVC