

## **INDOOR AIR QUALITY IN SCHOOLS**

When parents send children to school, they are concerned about their safety, well-being and learning environment. Unfortunately, most schools today do not provide acceptable levels of indoor air quality for the students, teachers, or staff. There have been many studies in the past few years which address the problems caused by inadequate ventilation, filtering, and air cleaning in school environments. Poor indoor air quality can have a negative effect on a child's health and academic performance. It has been estimated that more than 25 million children, over 50% of the students in the United States, attend schools without an adequate indoor air quality management plan.<sup>1</sup>

Indoor air quality ("IAQ") is defined by the concentrations of various pollutants including:

- Volatile Organic Compounds (VOC's)
- Carbon dioxide (CO<sub>2</sub>)
- Airborne fungi
- Mold and mildew
- Dust and dust mites

Specific concentration of these pollutants, as well as ventilation rates, have been linked to sick building syndrome ("SBS"). Sick building syndrome can be characterized by several symptoms, including:<sup>2</sup>

- Lethargy, lack of attention, drowsiness
- Headaches
- Sore throat
- Dry and itchy skin
- Nasal stuffiness and dryness (sinus infections)
- Dryness and pain in the eye.

Children have been shown, in recent studies, to be more prone to SBS than adults because they inhale more pollutants per body weight than adults, due to their higher breathing rates.<sup>3</sup>

### **Indoor Air Quality Affects Children's Health and Comfort**

1. Indoor exposure to VOCs has been associated with SBS symptoms in school children.<sup>4</sup>
2. Elevated CO<sub>2</sub> levels have been linked to symptoms of wheezing among children.<sup>5</sup>
3. Increased rates of asthma and asthma-related illnesses cause over 14 million missed school days per year in the United States.



















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