

Blastox® and Airborne Lead Particulate

Blastox® is a lead stabilization abrasive additive that converts lead in paint waste to a relatively insoluble lead silicate as indicated by TCLP performance. Blastox® does not, however, make the lead "go away", or disappear as some people might think. This bulletin intends to dispell the concept that "if I use Blastox®, I can eliminate the use of personal protective equipment (PPE) for my workers and the need for containment." Using Blastox® may assist in reducing airborne lead concentrations, as a state transportation department study demonstrated, but that reduction must not be construed as an indication that Blastox® can serve as a replacement for lead exposure control measures.

The study referenced above was a research project involving the removal of a lead-based coating system from a bridge structure using both recyclable and non-recyclable abrasive with and without the addition of Blastox®. As part of that research, airborne lead levels were monitored. The results generally indicated that using Blastox® with any abrasive produced a decrease in airborne lead by a factor of 3 to 5 times over using virgin abrasive alone. This reduction in airborne lead is a physical phenomenon. It occurs because Blastox® softens the removal process allowing the paint to be removed in chip form and thereby reducing the amount of lead paint dust.

Despite these decreases in airborne lead, dry blasting with Blastox® can produce airborne lead concentrations in excess of the action level of 30 ug/m³. Please note that levels of airborne lead produced during wet abrasive blasting with Blastox® may approach or be below the action level.

OSHA regulation 29 CFR 1926.62, Lead-in-Construction-Industry Standard, indicates that once airborne lead levels exceed the action level, workers must be protected from lead exposure at or above the Permissible Exposure Limit (PEL) of 50 ug/m³, calculated as an 8-hour time-weighted average (TWA). The TDJ Group, Inc. recommends contractors refer to this standard, as well as all other applicable industry standards for the selection of appropriate controls, including PPE to minimize lead exposure for both workers and the environment.

The above regulations and the use of all applicable general lead abatement safeguards are not suspended just because you use Blastox®. A safer work environment may be realized with respect to airborne lead concentrations, but please remember that Blastox® is the solution for eliminating the lead toxicity characteristic of the resultant waste. It does not eliminate the presence of lead, nor the need to protect against its exposure.