

Reassessing Current Exposure Limits

Overview of OSHA's Rulemaking for Beryllium

Maureen Ruskin
Directorate of Standards and Guidance

OSHA's Rulemaking on Beryllium

- Factors to be considered in revising OSHA's existing permissible exposure limit
- Overview of rulemaking activities

Setting an OSHA PEL

- Section 6(b)(5) of the OSH Act states that:

“The Secretary...shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard with the hazard dealt with by such standard for the period of his working life”

Statutes and Executive Orders that Impact on the Rulemaking Process

- Administrative Procedures Act
- Regulatory Flexibility Act
- Small Business Regulatory Enforcement Fairness Act
- Executive Order 13563 and 12866 (Regulatory Planning and Review) and 12612 (Federalism)
- Paperwork Reduction Act
- Unfunded Mandates Reform Act
- National Environmental Policy Act
- Privacy Act

An OSHA standard must:

- Be reasonably necessary (i.e. substantially reduce or eliminate significant risk of a material impairment of health)
- Eliminate significant risk or reduce it to the extent feasible
- Be technologically and economically feasible
- Be cost effective
- Better effectuate the purposes of the Act than an applicable consensus standard
- Be supported by substantial evidence in the record

Technologic and Economic Feasibility Court Findings

- A standard is technologically feasible if the PEL can be achieved in most operations, most of the time, through the use of engineering controls
- A standard is economically feasible if there is a reasonable likelihood that the costs of the standard will not threaten the existence or competitive structure of an industry

Major Rulemaking Milestones

- March 1999 and April of 2002 petitioned for an Emergency Temporary Standard
- November 2002 OSHA published a Request for Information
- January 2008 SBREFA Panel Review completed
- November 2010 peer review of the Health Effects and Risk Assessment Completed
- February 2012 Formally received regulatory text from Materion and United Steel workers

Beryllium Status/next steps

- The beryllium NPRM is currently in departmental review and expect to be sent to OMB in the near future
- Next Steps
 - Publication of a Proposed Rule
 - public comments

Overview of Rulemaking Steps





Annotated PELs Table

Occupational Exposure Limits

- Side-by-side comparison of OSHA PELs, Ca/OSHA PELs, NIOSH RELs, and ACGIH® TLVs®
- Direct links to source of OELs

OSHA Annotated Table Z-1^(a)

[*Go to list of all footnotes](#)

Substance	CAS No. ^(c)	Regulatory Limits			Recommended Limits	
		OSHA PEL ^(b)		Ca/OSHA PEL ^(f) <i>(as of 4/26/13)</i>	NIOSH REL ^(g) <i>(as of 4/26/13)</i>	ACGIH® 2013 TLV® ^(h)
		ppm ^(d)	mg/m ³ ^(e)	8-hour TWA (ST) STEL (C) Ceiling	Up to 10-hour TWA (ST) STEL (C) Ceiling	8-hour TWA (ST) STEL (C) Ceiling
Acetaldehyde	75-07-0	200	360	(C) 25 ppm	Ca See Appendix A See Appendix C	(C) 25 ppm
Acetic acid	64-19-7	10	25	10 ppm (ST) 15 ppm (C) 40 ppm	10 ppm (ST) 15 ppm	10 ppm (ST) 15 ppm
Acetic anhydride	108-24-7	5	20	(C) 5 ppm	(C) 5 ppm	1 ppm (ST) 3 ppm
Acetone	67-64-1	1000	2400	500 ppm (ST) 750 ppm (C) 3000 ppm	250 ppm	500 ppm (ST) 750 ppm
Acetonitrile	75-05-8	40	70	40 ppm (ST) 60 ppm	20 ppm	20 ppm
2-Acetylaminofluorene; see 1910.1014	53-96-3			See Section 5209	Ca See Appendix A	
Acetylene dichloride; see 1,2-Dichloroethylene						
Acetylene tetrabromide	79-27-6	1	14	1 ppm	See Appendix D	0.1 ppm (IFV)

<https://www.osha.gov/dsg/annotated-pels/>



Annotated PELs - Beryllium

- **OSHA PELs**
 - 8 Hour TWA: 2 $\mu\text{g}/\text{m}^3$; Ceiling: 5 $\mu\text{g}/\text{m}^3$; Maximum Peak: 25 $\mu\text{g}/\text{m}^3$ (30 minutes)
- **California**
 - 8 Hour TWA: 0.2 $\mu\text{g}/\text{m}^3$; Ceiling: 25 $\mu\text{g}/\text{m}^3$
- **NIOSH REL**
 - Ca (potential Carcinogen); Ceiling 0.5 $\mu\text{g}/\text{m}^3$
- **ACGIH 2014 TLV**
 - 0.05 $\mu\text{g}/\text{m}^3$ (inhalable)

Questions?

