



Boating Industry Association

# Submission: Proposed Reduction of Aluminium Welding Fumes

**ISSUE:** Submission to Safe Work Australia Regarding Proposed Reduction of Aluminium (Welding Fumes) WES

**SUBJECT:** Opposition to Proposed Reduction of Aluminium (Welding Fumes) WES to 1mg/m<sup>3</sup>

## INTRODUCTION

Safe Work Australia engaged an independent expert to undertake a [Review of the Workplace exposure standards for welding fumes \(NOC\) and aluminium \(welding fumes\)](#) (review). The review took the form of a literature review which recommends reducing the WES for Aluminium (welding fumes) from an 8 hour time weighted average (TWA) of 5mg/m<sup>3</sup> to a TWA of 1mg/m<sup>3</sup>.

This proposed reduction follows the Federal Government decision to [reduce the WES for Welding fumes \(Not otherwise classified \(NOC\)\)](#) from 5mg/m<sup>3</sup> to 1mg/m<sup>3</sup> implemented in December 2023. This decision was made by WHS Ministers following a Safe Work Australia recommendation which did not undergo any consultation or public scrutiny.

Submissions to this consultation will be used to inform Safe Work Australia Members' decision on whether to recommend the proposed reduction to work health and safety (WHS) Ministers.

Until a decision is made by WHS Ministers, the current WES for Aluminium (welding fumes) applies (TWA of 5mg/m<sup>3</sup>).

Submissions are sought by 11:59 pm (AEDT) on Friday 28 February 2025. Submissions can be made via the link under Have your say on the [consultation website](#) or via the email [Chemicals@swa.gov.au](mailto:Chemicals@swa.gov.au)

## SUBMISSION

The Boating Industry Association submits this response to Safe Work Australia's proposal to reduce the workplace exposure standard (WES) for aluminium (welding fumes) from 5mg/m<sup>3</sup> to 1mg/m<sup>3</sup>. While we acknowledge the importance of protecting worker health and safety, the BIA does not support the proposed reduction at this time, due to the insufficiency of robust, long-term relevant data, including health data, justifying such a significant change. Furthermore, the BIA believes no change to the WES is warranted, and no further review should be undertaken until the appropriate long-term, robust, and relevant data becomes available demonstrating health impacts due to aluminium welding that would necessitate such a review. The research identified the health impacts of aluminium as a welding fume alone, to be limited to respiratory irritation. The Safe Work Australia position to reduce this

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Contact: Neil Patchett GM Government & Public Relations e. [neil@bia.org.au](mailto:neil@bia.org.au); m 0418 279 465  
PO Box 1204 Crows Nest NSW 1585. Offices in: Queensland; New South Wales; and South Australia

exposure limit so substantively, is a deviation from standard practice of priority to carcinogens and exposures that cause severe or irreversible health impacts.

## **KEY CONCERNS**

1. **Lack of Robust Long-Term Data:** The BIA's primary concern is the absence of conclusive, long-term epidemiological studies specifically linking current exposure levels below 5mg/m<sup>3</sup> to adverse health outcomes in aluminium welders. While some studies suggest potential links at higher exposure levels, the evidence supporting a reduction to 1mg/m<sup>3</sup> remains weak and requires further investigation. The proposed reduction appears to be based on precautionary principles rather than definitive scientific evidence of harm at current exposure levels.
2. **Feasibility and Practicality:** Achieving a WES of 1mg/m<sup>3</sup> for aluminium (welding fumes) may be technically challenging and even infeasible in some welding environments, even with the implementation of all reasonably practicable control measures. This could lead to unnecessary production disruptions and potentially force some businesses to relocate or cease operations.
3. **Economic Impact on the Boating Industry:** The proposed reduction could impose substantial economic burdens on the boating industry, particularly on small and medium-sized enterprises that constitute a significant portion of the boat building sector. The costs associated with upgrading equipment, implementing additional ventilation systems, and possibly hiring additional staff to monitor compliance could lead to increased prices for consumers and reduced competitiveness for Australian boat builders in both domestic and international markets. Without unambiguous evidence justifying the necessity of such a drastic reduction, these costs may be disproportionate to the actual health risks.
4. **Job Security and Employment:** The potential for increased operational costs may lead to job losses or reduced hiring in a sector that is already vulnerable. Many businesses in the boating industry operate on tight margins, and the financial strain from complying with a lower WES could force some companies to downsize or close, adversely affecting employment rates in local communities that rely on these jobs.
5. **Focus on Existing Controls:** The BIA believes that a more effective approach would be to focus on ensuring consistent and proper implementation of existing control measures at the current WES of 5mg/m<sup>3</sup>. This includes promoting best practices in ventilation, respiratory protection, and worker training. Strengthening enforcement and compliance with the current standard may offer more immediate and tangible improvements in worker health and safety.
6. **Availability of Alternatives:** The BIA emphasises that there are existing alternatives and technologies that can mitigate exposure to welding fumes without necessitating a drastic reduction in the WES. Innovations in welding technology, fume extraction systems, and personal protective equipment (PPE) have shown promise in effectively reducing exposure levels without compromising productivity or economic viability. The focus should be on promoting these technologies rather than enforcing a new low

WEL that appears to be based on precautionary principles rather than definitive scientific evidence of harm at current exposure levels.

7. **Comprehensive Risk Assessment:** The BIA advocates for a thorough risk assessment that takes into account not only the health impacts but also the economic and operational implications of the proposed change. A comprehensive approach that balances worker safety with economic sustainability is essential for the long-term viability of the boating industry.
8. **Stakeholder Collaboration:** The BIA encourages Safe Work Australia to engage in collaborative discussions with industry stakeholders, including welders, boat builders, health professionals, and safety experts, to gather diverse perspectives on the proposed changes. This collaborative approach can lead to more informed decision-making and policies that reflect the realities of the industry.
9. **Need for Further Research:** As well documented in the *Review of the Workplace Exposure Standards for welding fumes (Not Otherwise Classified) and aluminium (welding fumes)* there is a general lack of robust science, evidence and data specific to the health impacts from aluminium welding. The BIA recommends Safe Work Australia prioritise further, high-quality research on the long-term health effects of exposure to aluminium (welding fumes) at levels below 5mg/m<sup>3</sup>. This research should include appropriately scaled epidemiological studies focusing specifically on welders and considering factors such as the type of welding process, fume composition and individual worker susceptibility.

A position paper or guidance from a reputable body would be essential to support the reduction and ensure the response is evidence-based. Without robust toxicological evidence of adverse health effects at current exposure levels, the proposed reduction may not yield measurable health benefits for workers.

## **RECOMMENDATIONS**

- **Maintain Current WES and Defer Further Review:** The BIA strongly recommends that Safe Work Australia maintain the current WES of 5mg/m<sup>3</sup> for aluminium (welding fumes) and defer any further review of the standard until sufficient, robust, long-term, and relevant data on health impacts specifically related to aluminium welding becomes available to warrant such a review.
- **Enhance Enforcement:** Focus on improving compliance with the existing WES of 5mg/m<sup>3</sup> and promoting best practices in welding fume control.
- **Consult with Industry:** Engage in meaningful consultation with industry stakeholders to assess the feasibility and cost implications of any future WES changes.
- **Invest in Research:** Prioritise funding and conducting comprehensive research on the health effects of aluminium (welding fumes) at current and lower exposure levels.
- **Conduct a Comprehensive Economic Impact Study:** Before any changes are made to the WES, a thorough economic impact assessment should be conducted to understand the potential consequences on the boating industry and its workforce.

- Promote Industry-Specific Solutions: Encourage the development of industry-specific guidelines and best practices that take into account the unique challenges and conditions faced by boat builders and welders in the sector.
- Foster Innovation in Safety Technology: Invest in research and development of new technologies that can help reduce exposure to welding fumes while maintaining productivity and economic viability.

The BIA is committed to working with Safe Work Australia to ensure a safe and healthy working environment for all welders. We believe that decisions regarding WES should be based on sound and relevant scientific evidence and a thorough understanding of the potential impacts on industry. We urge Safe Work Australia to carefully consider the concerns raised in this submission.

## **BACKGROUND**

The BIA is the peak industry body in Australia that represents the interests of boating which includes designers, manufacturers, importers, brokers, insurers, retailers, charters, yacht and boat clubs, marinas, events, surveyors and trades from boat builders to riggers, and more. BIA is an advocate for boaters and the boating lifestyle and supports safe, responsible, and enjoyable boating. BIA has members in all States and Territories.

The BIA reported industry national turnover last year of \$10.12 billion and employs more than 35,000 people. Seventy-five per cent are in small family businesses, employing local workers and supporting local communities including many regional areas of Australia

In Australia, more than 85 per cent of the population live within 50km of the coast, so it is little wonder that almost 1 in 5 households can have a boat or watercraft and that approximately 5 million go boating each year. People of all ages, gender and ability participate in boating across paddle, sail and power for leisure and sport.

Sincerely,



**Neil Patchett**

General Manager Government & Public Relations  
Boating Industry Association Ltd  
e. [neil@bia.org.au](mailto:neil@bia.org.au)  
m. 0418 279 465

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