

SAFETY DATA SHEET

6055

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name BOC WELD-GUARD ALUMINIUM BRIGHTENER & CLEANER
Synonym(s) 1307 - PRODUCT CODE • ALUMINIUM BRIGHTER AND CLEANER • WELD GUARD ALUMINIUM BRIGHTENER AND CLEANER • WELD-GUARD ALUM BRIGHTENER & CLEANER

1.2 Uses and uses advised against

Use(s) SCALE REMOVER

1.3 Details of the supplier of the product

Supplier name BOC LIMITED (AUSTRALIA)
Address 10 Julius Avenue, North Ryde, NSW, 2113, AUSTRALIA
Telephone 131 262, (02) 8874 4400
Fax 132 427 (24 hours)
Website <http://www.boc.com.au>

1.4 Emergency telephone number(s)

Emergency 1800 653 572 (24/7) (Australia only)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s) Acute Toxicity: Inhalation: Category 2
Acute Toxicity: Oral: Category 4
Corrosive to Metals: Category 1
Serious Eye Damage / Eye Irritation: Category 1
Skin Corrosion/Irritation: Category 1A

2.2 Label elements

Signal word DANGER

Pictogram(s)



Hazard statement(s)

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H330 Fatal if inhaled.

PRODUCT NAME BOC WELD-GUARD ALUMINIUM BRIGHTENER & CLEANER**Prevention statement(s)**

P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

Response statement(s)

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P320	Specific treatment is urgent - see first aid instructions.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.

Storage statement(s)

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.

Disposal statement(s)

P501	Dispose of contents/container in accordance with relevant regulations.
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2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
SULPHURIC ACID	7664-93-9	231-639-5	10 to 30%
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	203-905-0	<10%
AMMONIUM HYDROGEN DIFLUORIDE	1341-49-7	215-676-4	<3%
HYDROGEN FLUORIDE	7664-39-3	231-634-8	Not Available
WATER	7732-18-5	231-791-2	30 to 60%
ADDITIVE(S)	-	-	<10%

Ingredient Notes Hydrogen fluoride may generate in the head space of the container.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Full-face Type B (Inorganic and acid gas) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin contact occurs, immediately remove contaminated clothing. Flush skin under running water for 15 minutes. Then apply calcium gluconate gel. Contact a Poison Information Centre on 13 11 26 (Australia Wide).
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	Eye wash facilities and safety shower should be available. Calcium gluconate gel should be readily available wherever the product is used or stored.

4.2 Most important symptoms and effects, both acute and delayed

Over exposure may result in lung damage. Burning sensation and severe tissue damage following skin contact may be delayed several hours. Chronic exposure may result in discolouration of teeth; as well as lung, kidney, liver, ligament and bone (osteosclerosis, skeletal fluorosis) damage.

4.3 Immediate medical attention and special treatment needed

Eye Treatment: Flush the eye with water for at least 15 minutes, continue irrigation with isotonic saline or water until the severe pain of the burn is relieved. Instil several drops of sterile calcium gluconate (10% solution).

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases (fluorides, sulphur oxides) when heated to decomposition. May evolve flammable hydrogen gas in contact with some metals.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

2XE

2 Fine Water Spray.

X Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

E Evacuation of people in and around the immediate vicinity of the incident should be considered.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a secured, cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled and protected from physical damage when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation and fire protection systems.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
2-Butoxyethanol (EGBE)	SWA (AUS)	20	96.9	50	242
Fluorides, as F	SWA (AUS)	--	2.5	--	--
Hydrogen fluoride	SWA (AUS)	3	2.6 (Peak)	--	--
Sulphuric acid	SWA (AUS)	--	1	--	3

Biological limits

Ingredient	Determinant	Sampling Time	BEI
AMMONIUM HYDROGEN DIFLUORIDE	Fluoride in urine	Prior to shift	2 mg/L
	End of shift	End of shift	3 mg/L
ETHYLENE GLYCOL MONOBUTYL ETHER	Butoxyacetic acid (BAA) in urine (with hydrolysis)	End of shift	200 mg/g creatinine
HYDROGEN FLUORIDE	Fluoride in urine	Prior to shift	2 mg/L
	Fluoride in urine	End of shift	3 mg/L

Reference: ACGIH Biological Exposure Indices

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear butyl or viton (R) gloves.
Body	Wear coveralls and rubber boots and a PVC apron. When using large quantities or where heavy contamination is likely, wear impervious coveralls.
Respiratory	Wear a Full-face Type B (Inorganic and Acid gas) respirator. If spraying, with prolonged use, or if in confined areas, wear an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	VISCOUS WHITE TO AMBER COLOURED GEL
Odour	SLIGHT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	< 1 (Neat)
Vapour density	NOT AVAILABLE
Specific gravity	1.01
Solubility (water)	SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE

9.1 Information on basic physical and chemical properties

Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), alkalis (e.g. sodium hydroxide) and some metals. Also incompatible with glass.

10.6 Hazardous decomposition products

May evolve toxic gases (fluorides, sulphur oxides) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary	Highly corrosive - toxic. This product has the potential to cause adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Over exposure may result in lung damage. Burning sensation and severe tissue damage following skin contact may be delayed several hours. Chronic exposure may result in discolouration of teeth; as well as lung, kidney, liver, ligament and bone (osteosclerosis, skeletal fluorosis) damage.	
Eye	Highly corrosive. Contact may result in irritation, lacrimation, pain, redness and corneal burns with possible permanent eye damage.	
Inhalation	Corrosive - toxic. Over exposure may result in irritation of the nose and throat, coughing and bronchitis. High level exposure may result in ulceration of the respiratory tract, lung tissue damage, chemical pneumonitis and pulmonary oedema. Effects may be delayed.	
Skin	Highly corrosive - toxic. Contact may result in burning sensation (delayed), severe and deep burns, discolouration, severe tissue damage and death which may be delayed.	
Ingestion	Highly corrosive - toxic. Ingestion may result in burns to the mouth and throat, nausea, vomiting, ulceration of the gastrointestinal tract, oedema, rapid pulse, shock, unconsciousness, convulsions and death.	
Toxicity data	SULPHURIC ACID (7664-93-9)	
	LD50 (oral)	2140 mg/kg (rat)
	LC50 (inhalation)	18 mg/m ³ (guinea pig)
	ETHYLENE GLYCOL MONOBUTYL ETHER (111-76-2)	
	LD50 (oral)	300 mg/kg (rabbit)
	LD50 (dermal)	230 mg/kg (guinea pig)
	LC50 (inhalation)	700 ppm (mouse)
	HYDROGEN FLUORIDE (7664-39-3)	
	LC50 (inhalation)	1276 ppm/1 hour (rat)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

PRODUCT NAME BOC WELD-GUARD ALUMINIUM BRIGHTENER & CLEANER**12.3 Bioaccumulative potential**

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

SOIL: If released to soil, this product will dissolve the carbonate based soil materials due to its acidic nature. WATER: A significant amount will reach the water table where dilution and dispersion serve to reduce the acid concentration. Aquatic life may be threatened if the pH falls below 5.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Waste disposal Wearing the protective equipment detailed above, neutralise to pH 6-8 by SLOW addition to a saturated sodium bicarbonate solution or similar basic solution. Dilute with excess water and flush to drain. Waste disposal should only be undertaken in a well ventilated area.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	2922	2922	2922
14.2 Proper Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains sulfuric acid and ammonium bifluoride)	CORROSIVE LIQUID, TOXIC, N.O.S. (contains sulfuric acid and ammonium bifluoride)	CORROSIVE LIQUID, TOXIC, N.O.S. (contains sulfuric acid and ammonium bifluoride)
14.3 Transport hazard classes	8, 6.1	8, 6.1	8, 6.1
14.4 Packing Group	II	II	II

14.5 Environmental hazards No information provided

14.6 Special precautions for user

Hazchem code 2XE
GTEPG REFER
EMS F-A, S-B

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Poison schedule Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes C Corrosive
Xn Harmful

Risk phrases R22 Harmful if swallowed.
R35 Causes severe burns.

PRODUCT NAME BOC WELD-GUARD ALUMINIUM BRIGHTENER & CLEANER

Safety phrases	S22	Do not breathe dust.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
	S30	Never add water to this product.
	S37	Wear suitable gloves.
	S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
Inventory listing(s)	AUSTRALIA: AICS (Australian Inventory of Chemical Substances) All components are listed on AICS, or are exempt.	

16. OTHER INFORMATION

Additional information ACIDS: When mixing acids with water (diluting), caution must be taken as heat will be generated which causes violent spattering. Always add a small volume of acid to a large volume of water, NEVER the reverse.

HYDROFLUORIC ACID: Severe burns and tissue damage have been reported after direct contact with small quantities of low concentration (< 20 %) hydrofluoric acid. An immediate burning sensation and pain is not always apparent but is a delayed effect which may proceed to corrosive tissue damage and toxic systemic effects through absorption. Hydrofluoric acid has the potential to cause permanent tissue damage and to be fatal if contaminated areas are not treated immediately.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized System
	GTEPG	Group Text Emergency Procedure Guide
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m ³	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

PRODUCT NAME BOC WELD-GUARD ALUMINIUM BRIGHTENER & CLEANER

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

Prepared by

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au.

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