

**SAFETY DATA SHEET**

# 6054

Product Name **BOC WELD-GUARD STAINLESS STEEL PICKLING SOLUTION****1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

**Supplier Name** BOC LIMITED (AUSTRALIA)  
**Address** 10 Julius Avenue, North Ryde, NSW, AUSTRALIA, 2113  
**Telephone** 131 262, (02) 8874 4400  
**Fax** 132 427 (24 hours)  
**Emergency** 1800 653 572 (24/7) (Australia only)  
**Web Site** <http://www.boc.com.au/>

**Synonym(s)** 1117 - MANUFACTURER'S CODE • BOC WELD GUARD STAINLESS STEEL PICKLING SOLUTION • CALLINGTON HAVEN • FAGERSTA PICKLING SOLUTION • STEEL CLEANER • WELD SCALE REMOVER

**Use(s)** CLEANING AGENT • PICKLING AND ANODISING METALS

**SDS Date** 15 Nov 2011

**2. HAZARDS IDENTIFICATION**

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

**RISK PHRASES**

R8 Contact with combustible material may cause fire.  
R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.  
R35 Causes severe burns.

**SAFETY PHRASES**

S7/9 Keep container tightly closed and in a well ventilated place.  
S23 Do not breathe vapour.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S36/37 Wear suitable protective clothing and gloves.  
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

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

**UN No.** 2922 **DG Class** 8 **Subsidiary Risk(s)** 6.1  
**Packing Group** II **Hazchem Code** 2XE

**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

Ingredient	Formula	CAS No.	Content
NITRIC ACID	H-N-O3	7697-37-2	10-30%
HYDROFLUORIC ACID	HF	7664-39-3	<10%
WATER	H2O	7732-18-5	30-60%

#### 4. FIRST AID MEASURES

<b>Eye</b>	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.
<b>Inhalation</b>	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.
<b>Skin</b>	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).
<b>Ingestion</b>	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
<b>Special treatment</b>	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).
<b>First aid facilities</b>	Eye wash facilities and safety shower should be available. Calcium gluconate gel should be readily available wherever the product is used or stored.

#### 5. FIRE FIGHTING MEASURES

<b>Special hazards</b>	Non flammable. May evolve toxic gases (nitrogen oxides, fluorides and hydrogen fluoride) when heated to decomposition.
<b>Advice for firefighters</b>	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.
<b>Extinguishing media</b>	Prevent contamination of drains or waterways.
<b>Hazchem Code</b>	2XE

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Spillage</b>	Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.
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#### 7. STORAGE AND HANDLING

<b>Storage</b>	Store in a cool, dry, well ventilated area, removed from combustible materials, metal powders, reducing agents, alkalis, ammonia, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should be banded and have appropriate ventilation systems.
<b>Precautions for safe handling</b>	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.

#### 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

##### Exposure Stds

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Hydrofluoric Acid	SWA (AUS)	3	2.6	--	--
Nitric acid	SWA (AUS)	2	5.2	4	10

**Biological Limits** No biological limit allocated.

**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** Wear a PVC apron, PVC or rubber boots, viton (R) or butyl gloves, impervious coveralls and a Full-face Type B (Inorganic and Acid gas) respirator. With prolonged use, wear: an Air-line respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	CLEAR COLOURLESS LIQUID	Solubility (water)	SOLUBLE
Odour	PUNGENT ACIDIC ODOUR	Specific Gravity	NOT AVAILABLE
pH	ACIDIC	% Volatiles	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	Flammability	NON FLAMMABLE
Vapour Density	NOT AVAILABLE	Flash Point	NOT RELEVANT
Boiling Point	NOT AVAILABLE	Upper Explosion Limit	NOT RELEVANT
Melting Point	NOT AVAILABLE	Lower Explosion Limit	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE		
Autoignition Temperature	NOT AVAILABLE	Decomposition Temperature	NOT AVAILABLE
Partition Coefficient	NOT AVAILABLE	Viscosity	NOT AVAILABLE

## 10. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended conditions of storage.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to Avoid	Incompatible (violently) with combustible materials, metals, reducing agents (eg. amines), alkalis (eg. hydroxides), ammonia, heat and ignition sources.
Hazardous Decomposition Products	May evolve toxic gases (nitrogen oxides, fluorides and hydrogen fluoride) when heated to decomposition.
Hazardous Reactions	Polymerization is not expected to occur.

## 11. TOXICOLOGICAL INFORMATION

Health hazard summary	Highly corrosive - toxic. This product has the potential to cause serious adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Over exposure may result in severe and permanent eye, skin and respiratory damage.
Eye	Highly corrosive. Contact may result in irritation, lacrimation, pain, redness, conjunctivitis and corneal burns with possible permanent 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 severe burns to the mouth and throat, vomiting, abdominal pain, ulceration of the gastrointestinal tract, convulsions and death.
Toxicity Data	<p>NITRIC ACID (7697-37-2)</p> <p>LDLo (Ingestion): 430 mg/kg (human)</p> <p>HYDROFLUORIC ACID (7664-39-3)</p> <p>LC50 (Inhalation): 342 ppm/1 hour (mouse)</p> <p>LCLo (Inhalation): 50 ppm/30 minutes (human)</p> <p>LDLo (Intraperitoneal): 25 mg/m<sup>3</sup> (rat)</p> <p>LDLo (Skin): 500 mg/kg (mouse)</p> <p>LDLo (Subcutaneous): 112 mg/m<sup>3</sup> (frog)</p> <p>TCLo (Inhalation): 100 mg/m<sup>3</sup>/1 minute (man -eye, lung)</p> <p>TDLo (Ingestion): 143 mg/kg (rat)</p>

## 12. ECOLOGICAL INFORMATION

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 help to reduce the acid concentration. Aquatic life may be threatened if the pH falls below 5.
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## 13. DISPOSAL CONSIDERATIONS

Waste disposal	Neutralise with lime, weak alkali or similar. For small amounts absorb with sand or similar and dispose of to an approved landfill site. Contact the manufacturer for additional information.
Legislation	Dispose of in accordance with relevant local legislation.

## 14. TRANSPORT INFORMATION



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

Shipping Name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains hydrofluoric acid and nitric acid)				
UN No.	2922	DG Class	8	Subsidiary Risk(s)	6.1
Packing Group	II	Hazchem Code	2XE	GTEPG	8A1

## 15. REGULATORY INFORMATION

Poison Schedule	Classified as a Schedule 7 (S7) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
AICS	All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

## 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.

### ABBREVIATIONS:

ACGIH - American Conference of Industrial Hygienists.  
ADG - Australian Dangerous Goods.  
BEI - Biological Exposure Indice(s).  
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.  
CNS - Central Nervous System.  
EC No - European Community Number.  
HSNO - Hazardous Substances and New Organisms.  
IARC - International Agency for Research on Cancer.  
mg/m<sup>3</sup> - Milligrams per Cubic Metre.  
NOS - Not Otherwise Specified.  
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).  
ppm - Parts Per Million.  
RTECS - Registry of Toxic Effects of Chemical Substances.  
STEL - Short Term Exposure Limit.  
SWA - Safe Work Australia.  
TWA - Time Weighted Average.

### 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.

### PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this ChemAlert 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.

**Product Name**      **BOC WELD-GUARD STAINLESS STEEL PICKLING SOLUTION**

**Report Status**      This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer 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.

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.

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**End of Report**