

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name BONDERITE M-CR 1200S AERO KNOWN AS ALODINE 1200S
Synonym(s) ALODINE 1200S • NSN: 8030-01-642-8676 • NSN: 8030-66-027-1950
1200S ALODINE • 160048 - SDS NUMBER • 169308 - PRODUCT CODE • 169309 - PRODUCT CODE •
1939161 - PRODUCT CODE • 205803 - IDH NUMBER • ALODINE 1200S (FORMERLY) • BONDERITE M-
CR 1200S AERO KNOWN AS ALODINE 1200S (FORMERLY) • HENKEL ALODINE 1200S 20 KG

1.2 Uses and uses advised against

Use(s) COATING • CONVERSION COATING • METAL COATING

1.3 Details of the supplier of the safety data sheet

Supplier name HENKEL AUSTRALIA PTY LTD
Address 135 - 141 Canterbury Rd, Kilsyth, VIC, Australia, 3137
Telephone (03) 9724 6444
Fax (03) 9728 5877
Email msds@au.henkel.com
Website <http://www.loctite.com.au>

1.4 Emergency telephone number(s)

Emergency 1800 032 379; (03) 9724 6556

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS Classification(s) Oxidizing Solids: Category 1
Acute Toxicity: Oral: Category 3
Acute Toxicity: Skin: Category 3
Skin Corrosion/Irritation: Category 1A
Skin Sensitisation: Category 1
Acute Toxicity: Inhalation: Category 2
Respiratory Sensitisation: Category 1
Germ Cell Mutagenicity: Category 1B
Carcinogenicity: Category 1A
Toxic to Reproduction: Category 2
Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 1
Aquatic Toxicity (Chronic): Category 1

2.2 Label elements

Signal word

DANGER

Pictograms



Hazard statement(s)

H271 May cause fire or explosion; strong oxidizer.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

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H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Prevention statement(s)

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/Store away from clothing/incompatible materials/combustible materials.
P221	Take any precaution to avoid mixing with combustibles/incompatible materials.
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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P283	Wear fire/flammable resistant/retardant clothing.
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.
P306 + P360	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P310	Immediately call a POISON CENTER or doctor/physician.
P320	Specific treatment is urgent - see first aid instructions.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use appropriate media for extinction.
P371 + P380 + P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P391	Collect spillage.

Storage statement(s)

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

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
CHROMIUM TRIOXIDE	1333-82-0	215-607-8	30 - 60%
TRIPOTASSIUM HEXACYANOFERRATE	13746-66-2	237-323-3	10 - 30%
POTASSIUM FLUOROZIRCONATE	16923-95-8	240-985-6	<10%
SODIUM FLUORIDE	7681-49-4	231-667-8	<10%

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Ingredient	CAS number	EC number	Content
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	remainder

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 Class P3 (Particulate) respirator where an inhalation risk exists. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).
First aid facilities	Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

No information provided.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING 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 hexavalent chromium oxides when heated to decomposition. Oxidising agent - supports combustion. May evolve carbon oxides, nitrogen oxides and fluorine when heated to decomposition.

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

1W

1 Coarse Water Spray.

W Risk of violent reaction or explosion. Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

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.

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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 cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. Contamination with incompatibles may cause fire or explosion. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Substance	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Chromium (VI) Compounds (as Cr), water insoluble	SWA (AUS)	--	0.05	--	--
Fluorides (as F)	SWA (AUS)	--	2.5	--	--
Fluorides, as F	SWA (AUS)	--	2.5	--	--

Biological limits

Ingredient	Reference	Determinant	Sampling time	BEI
CHROMIUM TRIOXIDE	ACGIH BEI	Total chromium in urine	End of shift at end of workweek	25 µg/L
	ACGIH BEI	Total chromium in urine	Increase during shift	10 µg/L
SODIUM FLUORIDE	ACGIH BEI	Fluoride in urine	Prior to shift	2 mg/L
	ACGIH BEI	Fluoride in urine	End of shift	3 mg/L

8.2 Exposure controls

Engineering Controls

Avoid inhalation. In a laboratory situation use under a fume cupboard or other localised extraction ventilation equipment. Maintain dust levels below the recommended exposure standard.

PPE

- Eye/Face** Wear a faceshield and dust-proof goggles.
- Hand** Wear rubber or butyl gloves.
- Body** Wear coveralls.
- Respiratory** Where an inhalation risk exists, wear an Air-line respirator or a Full-face Class P3 (Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	ORANGE POWDER
Odour	MILD ODOUR
Odour Threshold	NOT AVAILABLE
pH	1.3 to 1.6 (1% solution)

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Melting Point	NOT AVAILABLE
Boiling Point	NOT AVAILABLE
Flash Point	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE
Flammability	NON FLAMMABLE
Upper Explosion Limit	NOT RELEVANT
Lower Explosion Limit	NOT RELEVANT
Vapour Pressure	NOT AVAILABLE
Vapour Density	NOT AVAILABLE
Solubility (water)	SOLUBLE
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE
Oxidising Properties	OXIDISING SOLID
Specific Gravity	NOT AVAILABLE

9.2 Other information

No information provided.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Oxidising agent. Incompatible with combustible materials, reducing agents (e.g. sulphites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), metals, heat and ignition sources.

10.6 Hazardous decomposition products

May evolve toxic hexavalent chromium oxides when heated to decomposition. May evolve carbon oxides, nitrogen oxides and fluorine when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health Hazard No information provided.

Summary

No information provided.

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No information provided.

No information provided.

No information provided.

CHROMIUM TRIOXIDE (1333-82-0)

LD50 (Ingestion): 80 mg/kg (rat)

LD50 (Intraperitoneal): 14 mg/kg (mouse)

LD50 (Intravenous): 9260 ug/kg (rat)

LDLo (Skin): 55 mg/kg (rat)

LDLo (Subcutaneous): 20 mg/kg (mouse)

TCLo (Inhalation): 110 ug/m³ (human)

TDLo (Intravenous): 5 mg/kg (hamster)

TDLo (Subcutaneous): 20 mg/kg (mouse)

TRIPOTASSIUM HEXACYANOFERRATE (13746-66-2)

LD50 (Ingestion): 2970 mg/kg (mouse)

LDLo (Ingestion): 1600 mg/kg (rat)

TCLo (Inhalation): 510 ug/m³/24H/26W (rat)

POTASSIUM FLUOROZIRCONATE (16923-95-8)

LD50 (Ingestion): 98 mg/kg (mouse)

SODIUM FLUORIDE (7681-49-4)

LD50 (Ingestion): 52 mg/kg (rat)

LD50 (Subcutaneous): 115 ug/kg (mouse)

LDLo (Ingestion): 71 mg/kg (human)

LDLo (Subcutaneous): 100 mg/kg (guinea pig)

TDLo (Ingestion): 214 ug/kg (human)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods**Waste disposal**

Wearing personal protective equipment, cover with a WEAK reducing agent (e.g. sodium bisulphite, thiosulphate, or ferrous salt; but NOT sulphur, carbon or strong reducing agent). Mix well and spray with water. Add 3M sulphuric acid if sulphite or ferrous salt is used. Add to container of water and neutralise with soda ash. Collect and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).

Legislation

Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

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

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	Land Transport (ADG)	Sea Transport (IMDG/IMO)	Air Transport (IATA/ICAO)
14.1 UN number	1463	1463	1463
14.2 UN proper shipping name	CHROMIUM TRIOXIDE, ANHYDROUS		
14.3 Transport hazard classes			
DG division	5.1	5.1	5.1
Subsidiary risk(s)	6.1 / 8	6.1 / 8	6.1 / 8
14.4 Packing group	II	II	II
14.5 Environmental hazards		Marine Pollutant	
14.6 Special precautions for user			
Hazchem Code	1W		
EMS		F-A, S-Q	

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule	Classified as a Schedule 6 Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).	
Classifications	C - Corrosive Carc. - Carcinogen Muta. - Mutagen N - Dangerous for the environment O - Oxidising Repr. - Reproductive toxin T - Toxic T+ - Very toxic Xi - Irritant	
Risk phrases	R9:	Explosive when mixed with combustible material.
	R24/25:	Toxic in contact with skin and if swallowed.
	R26:	Very toxic by inhalation.
	R35:	Causes severe burns.
	R42/43:	May cause sensitisation by inhalation and skin contact.
	R45:	May cause cancer.
	R46:	May cause heritable genetic damage.
	R48/23:	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
	R50/53:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R62:	Possible risk of impaired fertility.
Safety phrases	S45:	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
	S53:	Avoid exposure - obtain special instructions before use.
	S60:	This material and its container must be disposed of as hazardous waste.
	S61:	Avoid release to the environment. Refer to special instructions/safety data sheets.

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WHS regulatory information

Ingredient name	CAS number	Regulation	Details
CHROMIUM TRIOXIDE	1333-82-0	Restricted Hazardous Chemicals	Chromium & its compounds. For abrasive blasting >0.5% (except as specified for wet blasting).
		Schedule 14 - Health Monitoring	Chromium (inorganic)

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**

All components are listed on AICS, or are exempt.

15.2 Chemical safety assessment

No information provided.

16. OTHER INFORMATION

Additional information 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 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.

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

Report Status

This ChemAlert report has been independently compiled by RMT's scientific department utilising the original Safety Data Sheet ('SDS') for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research 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. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been

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authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This ChemAlert report does not constitute the manufacturer's original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. 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 ChemAlert report, 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 ChemAlert report.

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End of Report