



## Consolidated Alloys Typemetal

### CA Group

Chemwatch: 22-1239

Version No: 8.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 3

Issue Date: 01/11/2019

Print Date: 25/03/2022

S.GHS.AUS.EN.E

## SECTION 1 Identification of the substance / mixture and of the company / undertaking

### Product Identifier

|                               |                               |
|-------------------------------|-------------------------------|
| Product name                  | Consolidated Alloys Typemetal |
| Chemical Name                 | Not Applicable                |
| Synonyms                      | Not Available                 |
| Chemical formula              | Not Applicable                |
| Other means of identification | Not Available                 |

### Relevant identified uses of the substance or mixture and uses advised against

|                          |                                                |
|--------------------------|------------------------------------------------|
| Relevant identified uses | Used in the printing industry and for casting. |
|--------------------------|------------------------------------------------|

### Details of the supplier of the safety data sheet

|                         |                                                                        |
|-------------------------|------------------------------------------------------------------------|
| Registered company name | CA Group                                                               |
| Address                 | 32 Industrial Avenue Thomastown VIC 3074 Australia                     |
| Telephone               | +61 3 8301 7100                                                        |
| Fax                     | +61 3 9359 4076                                                        |
| Website                 | <a href="http://www.cagroup.com.au">www.cagroup.com.au</a>             |
| Email                   | <a href="mailto:jmarchese@cagroup.com.au">jmarchese@cagroup.com.au</a> |

### Emergency telephone number

|                                   |                                           |
|-----------------------------------|-------------------------------------------|
| Association / Organisation        | (03) 8301 7100                            |
| Emergency telephone numbers       | (03) 8301 7107 (Business hours 9am – 5pm) |
| Other emergency telephone numbers | 0428 904 506 (After Hours)                |

## SECTION 2 Hazards identification

### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS.** According to the WHS Regulations and the ADG Code.

#### ChemWatch Hazard Ratings

|              | Min | Max |              |
|--------------|-----|-----|--------------|
| Flammability | 0   |     |              |
| Toxicity     | 2   |     | 0 = Minimum  |
| Body Contact | 0   |     | 1 = Low      |
| Reactivity   | 0   |     | 2 = Moderate |
| Chronic      | 3   |     | 3 = High     |
|              |     |     | 4 = Extreme  |

|                    |                                                                                                                                     |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Poisons Schedule   | Not Applicable                                                                                                                      |
| Classification [1] | Reproductive Toxicity Effects on or via Lactation, Reproductive Toxicity Category 1B                                                |
| Legend:            | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

### Label elements

|                     |        |
|---------------------|--------|
| Hazard pictogram(s) |        |
| Signal word         | Danger |

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## Hazard statement(s)

|        |                                                               |
|--------|---------------------------------------------------------------|
| H362   | May cause harm to breast-fed children.                        |
| H360Df | May damage the unborn child. Suspected of damaging fertility. |

## Precautionary statement(s) Prevention

|      |                                                                 |
|------|-----------------------------------------------------------------|
| P201 | Obtain special instructions before use.                         |
| P260 | Do not breathe dust/fume.                                       |
| P263 | Avoid contact during pregnancy and while nursing.               |
| P280 | Wear protective gloves and protective clothing.                 |
| P270 | Do not eat, drink or smoke when using this product.             |
| P264 | Wash all exposed external body areas thoroughly after handling. |

## Precautionary statement(s) Response

|           |                                                         |
|-----------|---------------------------------------------------------|
| P308+P313 | IF exposed or concerned: Get medical advice/ attention. |
|-----------|---------------------------------------------------------|

## Precautionary statement(s) Storage

|      |                  |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

## Precautionary statement(s) Disposal

|      |                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|------|----------------------------------------------------------------------------------------------------------------------------------|

## SECTION 3 Composition / information on ingredients

## Substances

See section below for composition of Mixtures

## Mixtures

| CAS No    | %[weight] | Name            |
|-----------|-----------|-----------------|
| 7439-92-1 | >60       | <u>lead</u>     |
| 7440-31-5 | NotSpec   | <u>tin</u>      |
| 7440-36-0 | NotSpec   | <u>antimony</u> |

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; \* EU IOELVs available

## SECTION 4 First aid measures

## Description of first aid measures

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye Contact  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>Wash out immediately with fresh running water.</li> <li>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> <li>Generally not applicable.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Skin Contact | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> <li>Generally not applicable.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Inhalation   | <ul style="list-style-type: none"> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor.</li> <li>Generally not applicable.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Ingestion    | <ul style="list-style-type: none"> <li><b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li> <li>For advice, contact a Poisons Information Centre or a doctor.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li> </ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"> <li><b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> <li>Generally not applicable.</li> </ul> |

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## Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- ▶ Gastric acids solubilise lead and its salts and lead absorption occurs in the small bowel.
- ▶ Particles of less than 1 µm diameter are substantially absorbed by the alveoli following inhalation.
- ▶ Lead is distributed to the red blood cells and has a half-life of 35 days. It is subsequently redistributed to soft tissue & bone-stores or eliminated. The kidney accounts for 75% of daily lead loss; integumentary and alimentary losses account for the remainder.
- ▶ Neurasthenic symptoms are the most common symptoms of intoxication. Lead toxicity produces a classic motor neuropathy. Acute encephalopathy appears infrequently in adults. Diazepam is the best drug for seizures.
- ▶ Whole-blood lead is the best measure of recent exposure; free erythrocyte protoporphyrin (FEP) provides the best screening for chronic exposure. Obvious clinical symptoms occur in adults when whole-blood lead exceeds 80 µg/dL.
- ▶ British Anti-Lewisite is an effective antidote and enhances faecal and urinary excretion of lead. The onset of action of BAL is about 30 minutes and most of the chelated metal complex is excreted in 4-6 hours, primarily in the bile. Adverse reaction appears in up to 50% of patients given BAL in doses exceeding 5 mg/kg. CaNa2EDTA has also been used alone or in concert with BAL as an antidote. D-penicillamine is the usual oral agent for mobilisation of bone lead; its use in the treatment of lead poisoning remains investigational. 2,3-dimercapto-1-propanesulfonic acid (DMPS) and dimercaptosuccinic acid (DMSA) are water soluble analogues of BAL and their effectiveness is undergoing review. As a rule, stop BAL if lead decreases below 50 µg/dL; stop CaNa2EDTA if blood lead decreases below 40 µg/dL or urinary lead drops below 2 mg/24hrs.

[Ellenhorn & Barceloux: Medical Toxicology]

## BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

| Determinant                     | Index                                             | Sampling Time          | Comments |
|---------------------------------|---------------------------------------------------|------------------------|----------|
| 1. Lead in blood                | 30 µg/100 ml                                      | Not Critical           |          |
| 2. Lead in urine                | 150 µg/gm creatinine                              | Not Critical           | B        |
| 3. Zinc protoporphyrin in blood | 250 µg/100 ml erythrocytes OR 100 µg/100 ml blood | After 1 month exposure | B        |

B: Background levels occur in specimens collected from subjects **NOT** exposed.

## SECTION 5 Firefighting measures

## Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

## Special hazards arising from the substrate or mixture

|                      |             |
|----------------------|-------------|
| Fire Incompatibility | None known. |
|----------------------|-------------|

## Advice for firefighters

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire Fighting         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> </ul> <p>Slight hazard when exposed to heat, flame and oxidisers.</p>                                                                                                                                                                                                                                                                                                                                                                                                         |
| Fire/Explosion Hazard | <p>Under certain conditions the material may become combustible because of the ease of ignition which occurs after the material reaches a high specific area ratio (thin sections, fine particles, or molten states). However, the same material in massive solid form is comparatively difficult to ignite. Nearly all metals will burn in air under certain conditions. Some are oxidised rapidly in the presence of air or moisture, generating sufficient heat to reach their ignition temperatures.</p> <p>Others oxidise so slowly that heat generated during oxidation is dissipated before the metal becomes hot enough to ignite.</p> <p>Particle size, shape, quantity, and alloy are important factors to be considered when evaluating metal combustibility. Combustibility of metallic alloys may differ and vary widely from the combustibility characteristics of the alloys' constituent elements.</p> <p>Ignites spontaneously in air (pyrophoric) and burns with intense heat.</p> <p>Decomposition may produce toxic fumes of:</p> <p>metal oxides</p> |
| HAZCHEM               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## SECTION 6 Accidental release measures

## Personal precautions, protective equipment and emergency procedures

See section 8

## Environmental precautions

See section 12

## Methods and material for containment and cleaning up

|              |                                                                                                                                                                                                                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minor Spills | <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>                                                  |
| Major Spills | <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Wear protective clothing, safety glasses, dust mask, gloves.</li> <li>▶ Secure load if safe to do so. Bundle/collect recoverable product.</li> <li>▶ Use dry clean up procedures and avoid generating dust.</li> </ul> |

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- ▶ Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- ▶ Water may be used to prevent dusting.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

## Precautions for safe handling

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safe handling     | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> </ul>                                                                |
| Other information | <ul style="list-style-type: none"> <li>▶ <b>DO NOT store near acids, or oxidising agents</b></li> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> <li>▶ Protect containers against physical damage and check regularly for leaks.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Store away from incompatible materials.</li> </ul> |

## Conditions for safe storage, including any incompatibilities

|                         |                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable container      | Generally packaging as originally supplied with the article or manufactured item is sufficient to protect against physical hazards. If repackaging is required ensure the article is intact and does not show signs of wear. As far as is practicably possible, reuse the original packaging or something providing a similar level of protection to both the article and the handler. |
| Storage incompatibility | Derivative of electronegative metal. <ul style="list-style-type: none"> <li>▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> </ul>                                                                                                                                                                                                                       |

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

| Source                       | Ingredient | Material name                         | TWA        | STEL          | Peak          | Notes         |
|------------------------------|------------|---------------------------------------|------------|---------------|---------------|---------------|
| Australia Exposure Standards | lead       | Lead, inorganic dusts & fumes (as Pb) | 0.05 mg/m3 | Not Available | Not Available | Not Available |
| Australia Exposure Standards | tin        | Tin, metal                            | 2 mg/m3    | Not Available | Not Available | Not Available |
| Australia Exposure Standards | antimony   | Antimony & compounds (as Sb)          | 0.5 mg/m3  | Not Available | Not Available | Not Available |

## Emergency Limits

| Ingredient | TEEL-1     | TEEL-2    | TEEL-3    |
|------------|------------|-----------|-----------|
| lead       | 0.15 mg/m3 | 120 mg/m3 | 700 mg/m3 |
| tin        | 6 mg/m3    | 67 mg/m3  | 400 mg/m3 |
| antimony   | 1.5 mg/m3  | 13 mg/m3  | 80 mg/m3  |

| Ingredient | Original IDLH | Revised IDLH  |
|------------|---------------|---------------|
| lead       | Not Available | Not Available |
| tin        | Not Available | Not Available |
| antimony   | Not Available | Not Available |

## Exposure controls

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriate engineering controls | Articles or manufactured items, in their original condition, generally don't require engineering controls during handling or in normal use. Exceptions may arise following extensive use and subsequent wear, during recycling or disposal operations where substances, found in the article, may be released to the environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Personal protection              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Eye and face protection          | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.</li> </ul> No special equipment required due to the physical form of the product. |
| Skin protection                  | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Hands/feet protection            | Wear general protective gloves, eg. light weight rubber gloves.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                         |                                                                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Body protection</b>  | See Other protection below                                                                                                                                                 |
| <b>Other protection</b> | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C apron.</li> <li>▶ Barrier cream.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eye wash unit.</li> </ul> |

**Respiratory protection**

Respiratory protection not normally required due to the physical form of the product.

**SECTION 9 Physical and chemical properties****Information on basic physical and chemical properties**

|                                                     |                                                          |                                                |                |
|-----------------------------------------------------|----------------------------------------------------------|------------------------------------------------|----------------|
| <b>Appearance</b>                                   | Silver or grey dull odourless solid; insoluble in water. |                                                |                |
| <b>Physical state</b>                               | Manufactured                                             | <b>Relative density (Water = 1)</b>            | Not Available  |
| <b>Odour</b>                                        | Not Available                                            | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available                                            | <b>Auto-ignition temperature (°C)</b>          | Not Applicable |
| <b>pH (as supplied)</b>                             | Not Applicable                                           | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available                                            | <b>Viscosity (cSt)</b>                         | Not Applicable |
| <b>Initial boiling point and boiling range (°C)</b> | Not Available                                            | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | Not Applicable                                           | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Applicable                                           | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Applicable                                           | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Applicable                                           | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Applicable |
| <b>Lower Explosive Limit (%)</b>                    | Not Applicable                                           | <b>Volatile Component (%vol)</b>               | Not Applicable |
| <b>Vapour pressure (kPa)</b>                        | Not Applicable                                           | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water</b>                          | Immiscible                                               | <b>pH as a solution (Not Available%)</b>       | Not Applicable |
| <b>Vapour density (Air = 1)</b>                     | Not Applicable                                           | <b>VOC g/L</b>                                 | Not Applicable |

**SECTION 10 Stability and reactivity**

|                                           |               |
|-------------------------------------------|---------------|
| <b>Reactivity</b>                         | See section 7 |
| <b>Chemical stability</b>                 |               |
| <b>Possibility of hazardous reactions</b> | See section 7 |
| <b>Conditions to avoid</b>                | See section 7 |
| <b>Incompatible materials</b>             | See section 7 |
| <b>Hazardous decomposition products</b>   | See section 5 |

**SECTION 11 Toxicological information****Information on toxicological effects**

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhaled</b>      | The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Ingestion</b>    | Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Skin Contact</b> | <p>Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>                                                                                                                                                    |
| <b>Eye</b>          | Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Chronic</b>      | <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.</p> <p>Ample evidence exists that developmental disorders are directly caused by human exposure to the material.</p> <p>Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.</p> <p>Lead, in large amounts, can affect the blood, nervous system, heart, glands, immune system and digestive system. Anaemia may occur.</p> |

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| Consolidated Alloys<br>Typemetal                                                                                                                                                                                                            | TOXICITY                                          | IRRITATION                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------|
|                                                                                                                                                                                                                                             | Not Available                                     | Not Available                                                    |
| lead                                                                                                                                                                                                                                        | TOXICITY                                          | IRRITATION                                                       |
|                                                                                                                                                                                                                                             | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>     | Not Available                                                    |
|                                                                                                                                                                                                                                             | Inhalation(Rat) LC50; >5.05 mg/l4h <sup>[1]</sup> |                                                                  |
| tin                                                                                                                                                                                                                                         | TOXICITY                                          | IRRITATION                                                       |
|                                                                                                                                                                                                                                             | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>     | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|                                                                                                                                                                                                                                             | Inhalation(Rat) LC50; >4.75 mg/l4h <sup>[1]</sup> | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |
| antimony                                                                                                                                                                                                                                    | TOXICITY                                          | IRRITATION                                                       |
|                                                                                                                                                                                                                                             | Dermal (rabbit) LD50: >8000 mg/kg <sup>[1]</sup>  | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|                                                                                                                                                                                                                                             | Inhalation(Rat) LC50; >5.2 mg/l4h <sup>[1]</sup>  | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |
| Oral (Rat) LD50; 7000 mg/kg <sup>[2]</sup>                                                                                                                                                                                                  |                                                   |                                                                  |
| <b>Legend:</b> 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |                                                   |                                                                  |

|                                   |                                                                                                                                                  |                          |   |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---|
| LEAD                              | WARNING: Lead is a cumulative poison and has the potential to cause abortion and intellectual impairment to unborn children of pregnant workers. |                          |   |
| TIN                               | No significant acute toxicological data identified in literature search.                                                                         |                          |   |
| Acute Toxicity                    | ✗                                                                                                                                                | Carcinogenicity          | ✗ |
| Skin Irritation/Corrosion         | ✗                                                                                                                                                | Reproductivity           | ✓ |
| Serious Eye Damage/Irritation     | ✗                                                                                                                                                | STOT - Single Exposure   | ✗ |
| Respiratory or Skin sensitisation | ✗                                                                                                                                                | STOT - Repeated Exposure | ✗ |
| Mutagenicity                      | ✗                                                                                                                                                | Aspiration Hazard        | ✗ |

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

## Toxicity

| Consolidated Alloys<br>Typemetal                                                                                                                                                                                                                                                                                                        | Endpoint      | Test Duration (hr) | Species                       | Value           | Source        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------------------------|-----------------|---------------|
|                                                                                                                                                                                                                                                                                                                                         | Not Available | Not Available      | Not Available                 | Not Available   | Not Available |
| lead                                                                                                                                                                                                                                                                                                                                    | Endpoint      | Test Duration (hr) | Species                       | Value           | Source        |
|                                                                                                                                                                                                                                                                                                                                         | NOEC(ECx)     | Not Available      | Crustacea                     | 0.051mg/L       | 5             |
|                                                                                                                                                                                                                                                                                                                                         | LC50          | 96h                | Fish                          | 1.17mg/l        | 4             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 72h                | Algae or other aquatic plants | 1.191mg/L       | 4             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 96h                | Algae or other aquatic plants | 0.282-0.864mg/l | 4             |
| tin                                                                                                                                                                                                                                                                                                                                     | Endpoint      | Test Duration (hr) | Species                       | Value           | Source        |
|                                                                                                                                                                                                                                                                                                                                         | Not Available | Not Available      | Not Available                 | Not Available   | Not Available |
| antimony                                                                                                                                                                                                                                                                                                                                | Endpoint      | Test Duration (hr) | Species                       | Value           | Source        |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 96h                | Algae or other aquatic plants | 0.61mg/l        | 2             |
|                                                                                                                                                                                                                                                                                                                                         | NOEC(ECx)     | 2160h              | Algae or other aquatic plants | 0.032mg/l       | 2             |
|                                                                                                                                                                                                                                                                                                                                         | LC50          | 96h                | Fish                          | 0.93mg/l        | 2             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 72h                | Algae or other aquatic plants | >2.4mg/l        | 2             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 48h                | Crustacea                     | 423.45mg/l      | 2             |
| <b>Legend:</b> Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |               |                    |                               |                 |               |

DO NOT discharge into sewer or waterways.

## Persistence and degradability

Continued...

## Consolidated Alloys Typemetal

| Ingredient | Persistence: Water/Soil               | Persistence: Air                      |
|------------|---------------------------------------|---------------------------------------|
|            | No Data available for all ingredients | No Data available for all ingredients |

## Bioaccumulative potential

| Ingredient | Bioaccumulation                       |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

## Mobility in soil

| Ingredient | Mobility                              |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

## SECTION 13 Disposal considerations

## Waste treatment methods

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product / Packaging disposal | <ul style="list-style-type: none"> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li><b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> </ul> |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 14 Transport information

## Labels Required

|                  |                |
|------------------|----------------|
| Marine Pollutant | NO             |
| HAZCHEM          | Not Applicable |

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name | Group         |
|--------------|---------------|
| lead         | Not Available |
| tin          | Not Available |
| antimony     | Not Available |

Transport in bulk in accordance with the ICG Code

| Product name | Ship Type     |
|--------------|---------------|
| lead         | Not Available |
| tin          | Not Available |
| antimony     | Not Available |

## SECTION 15 Regulatory information

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

## lead is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals  
 Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4  
 Australian Inventory of Industrial Chemicals (AIIC)  
 Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans  
 International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

## tin is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

## antimony is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4  
 Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

## National Inventory Status

Continued...

## Consolidated Alloys Typemetal

| National Inventory                              | Status                                                                                                                                                                                            |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AIIC / Australia Non-Industrial Use | Yes                                                                                                                                                                                               |
| Canada - DSL                                    | Yes                                                                                                                                                                                               |
| Canada - NDSL                                   | No (lead; tin; antimony)                                                                                                                                                                          |
| China - IECSC                                   | Yes                                                                                                                                                                                               |
| Europe - EINEC / ELINCS / NLP                   | Yes                                                                                                                                                                                               |
| Japan - ENCS                                    | No (lead; tin; antimony)                                                                                                                                                                          |
| Korea - KECI                                    | Yes                                                                                                                                                                                               |
| New Zealand - NZIoC                             | Yes                                                                                                                                                                                               |
| Philippines - PICCS                             | Yes                                                                                                                                                                                               |
| USA - TSCA                                      | Yes                                                                                                                                                                                               |
| Taiwan - TCSI                                   | Yes                                                                                                                                                                                               |
| Mexico - INSQ                                   | Yes                                                                                                                                                                                               |
| Vietnam - NCI                                   | Yes                                                                                                                                                                                               |
| Russia - FBEPH                                  | Yes                                                                                                                                                                                               |
| <b>Legend:</b>                                  | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

## SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 01/11/2019 |
| Initial Date  | 25/01/2010 |

## SDS Version Summary

| Version | Date of Update | Sections Updated                                                                     |
|---------|----------------|--------------------------------------------------------------------------------------|
| 7.1     | 10/02/2017     | Classification, Environmental, Spills (major), Spills (minor), Transport Information |
| 8.1     | 01/11/2019     | One-off system update. NOTE: This may or may not change the GHS classification       |

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

## Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average  
PC—STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
ES: Exposure Standard  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index  
AIIC: Australian Inventory of Industrial Chemicals  
DSL: Domestic Substances List  
NDSL: Non-Domestic Substances List  
IECSC: Inventory of Existing Chemical Substance in China  
EINECS: European INventory of Existing Commercial chemical Substances  
ELINCS: European List of Notified Chemical Substances  
NLP: No-Longer Polymers  
ENCS: Existing and New Chemical Substances Inventory  
KECI: Korea Existing Chemicals Inventory  
NZIoC: New Zealand Inventory of Chemicals  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
TSCA: Toxic Substances Control Act  
TCSI: Taiwan Chemical Substance Inventory  
INSQ: Inventario Nacional de Sustancias Químicas  
NCI: National Chemical Inventory  
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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