

**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/19/2015

Reviewed on 10/10/2015

**1 Identification**

- **Product identifier**
- **Trade name:** *UT18AEV*
- **Application of the substance / the mixture** *Metal working*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Carpenter Technology Corp  
 PO Box 14662, Reading, PA 19612  
 110 West Bern Street  
 READING, PA 19601  
 USA
- **Information department:** *Health and Safety Department*
- **Emergency telephone number:** *During normal opening times: +1 (610) 208-2134*

 \* **2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

Repr. 1A H360 May damage fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** *The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**  
*arsenic*  
*lead*  
*nickel*
- **Hazard statements**  
*May cause an allergic skin reaction.*  
*May cause cancer.*

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*May damage fertility or the unborn child.**May cause damage to organs through prolonged or repeated exposure.***· Precautionary statements***Do not breathe dust/fume/gas/mist/vapors/spray.**Wear protective gloves.**Contaminated work clothing must not be allowed out of the workplace.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Specific treatment (see on this label).**Wash contaminated clothing before reuse.**IF exposed or concerned: Get medical advice/attention.**If skin irritation or rash occurs: Get medical advice/attention.**Get medical advice/attention if you feel unwell.**IF ON SKIN: Wash with plenty of water.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Classification system:****· NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**

Health = \*1

Fire = 0

Reactivity = 0

**· Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

### \* 3 Composition/information on ingredients

**· Chemical characterization: Mixtures****· Description:** Mixture of the substances listed below with nonhazardous additions.**· Dangerous components:**

|           |                |           |
|-----------|----------------|-----------|
| 7440-38-2 | arsenic        | 2.5-<10%  |
| 7440-31-5 | tin            | 2.5-<10%  |
| 7723-14-0 | red phosphorus | 2.5-<10%  |
| 7429-90-5 | aluminium      | 2.5-<10%  |
| 7440-47-3 | chromium       | 2.5-<10%  |
| 7439-98-7 | molybdenum     | 0.1-≤2.5% |
| 7439-92-1 | lead           | 0.1-≤2.5% |
| 7704-34-9 | sulfur         | 1-≤2.5%   |

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7440-02-0 nickel

0.1-&lt;1%

## 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** The product is not flammable.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** No special measures required.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Not applicable.
- **Information about protection against explosions and fires:** Not applicable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

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· *Specific end use(s)* No further relevant information available.

### 8 Exposure controls/personal protection

· *Additional information about design of technical systems:* No further data; see item 7.· *Control parameters*· *Components with limit values that require monitoring at the workplace:*

#### 7440-38-2 arsenic

PEL Long-term value: 0.5\* 0.01\*\* mg/m<sup>3</sup>  
as As; \*organic\*\*inorg. compds.; 29 CFR 1910.1018

REL Ceiling limit value: 0.002 mg/m<sup>3</sup>  
as As; 15min; See Pocket Guide App. A

TLV Long-term value: 0.01 mg/m<sup>3</sup>  
as As; BEI

#### 7440-31-5 tin

PEL Long-term value: 2 mg/m<sup>3</sup>  
metal

REL Long-term value: 2 mg/m<sup>3</sup>

TLV Long-term value: 2 mg/m<sup>3</sup>  
metal

#### 7723-14-0 red phosphorus

REL Long-term value: 0.1 mg/m<sup>3</sup>

#### 7429-90-5 aluminium

PEL Long-term value: 15\*; 15\*\* mg/m<sup>3</sup>  
\*Total dust; \*\* Respirable fraction

REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
as Al\*Total dust\*\*Respirable/pyro powd./welding f.

#### 7440-47-3 chromium

PEL Long-term value: 1\* 0.5\*\* mg/m<sup>3</sup>  
\*metal; \*\*inorganic compds., as Cr

REL Long-term value: 0.5\* mg/m<sup>3</sup>  
\*metal+inorg.compds.as Cr; See Pocket Guide App. C

TLV Long-term value: 0.5 mg/m<sup>3</sup>

#### 7439-98-7 molybdenum

PEL Long-term value: 15\* mg/m<sup>3</sup>  
\*Total dust

TLV Long-term value: 10\* 3\*\* mg/m<sup>3</sup>  
as Mo; \*inhalable fraction \*\* respirable fraction

#### 7439-92-1 lead

PEL Long-term value: 0.05\* mg/m<sup>3</sup>  
\*see 29 CFR 1910.1025

REL Long-term value: 0.05\* mg/m<sup>3</sup>  
\*8-hr TWA, excl. lead arsenate; See PocketGuideApp.C

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|  |   |
|--|---|
| TLV  | Long-term value: 0.05* mg/m <sup>3</sup><br>*and inorganic compounds, as Pb; BEI  |
| <b>7440-02-0 nickel</b>                            |   |
| PEL  | Long-term value: 1 mg/m <sup>3</sup>  |
| REL  | Long-term value: 0.015 mg/m <sup>3</sup><br>as Ni; See Pocket Guide App. A  |
| TLV  | Long-term value: 1.5* mg/m <sup>3</sup><br>elemental, *inhalable fraction   |
| · <b>Ingredients with biological limit values:</b> |   |
| <b>7440-38-2 arsenic</b>                           |   |
| BEI  | 35 µg As/L<br>Medium: urine<br>Time: end of workweek<br>Parameter: Inorganic arsenic plus methylated metabolites (background)   |
| <b>7439-92-1 lead</b>                              |   |
| BEI  | 30 µg/100 ml<br>Medium: blood<br>Time: not critical<br>Parameter: Lead<br><br>10 µg/100 ml<br>Medium: blood<br>Time: not critical<br>Parameter: Lead (women of child bearing potential) |

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Solid  
**Color:** According to product specification

- **Odor:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 74 °C (165 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not determined.

- **Ignition temperature:** 300 °C (572 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.  
Explosive when mixed with oxidising substances.

- **Explosion limits:**

**Lower:** 0.0 Vol %

**Upper:** 0.0 Vol %

- **Vapor pressure:** Not applicable.

- **Density at 20 °C (68 °F):** 6.58812 g/cm<sup>3</sup> (54.978 lbs/gal)

- **Relative density** Not determined.

- **Vapour density** Not applicable.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with**

**Water:** Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

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|                            |  |
|----------------------------|--|
| · <b>Solvent content:</b>  |  |
| <b>Organic solvents:</b>   | 0.0 %                                      |
| · <b>Solids content:</b>   | 93.4 %                                     |
| · <b>Other information</b> | No further relevant information available. |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7440-38-2 arsenic

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 763 mg/kg (rat) |
|------|------|-----------------|

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

|           |          |    |
|-----------|----------|----|
| 7440-38-2 | arsenic  | I  |
| 7440-47-3 | chromium | 3  |
| 7439-92-1 | lead     | 2B |
| 7440-02-0 | nickel   | I  |

- **NTP (National Toxicology Program)**

|           |         |   |
|-----------|---------|---|
| 7440-38-2 | arsenic | K |
| 7439-92-1 | lead    | R |
| 7440-02-0 | nickel  | R |

- **OSHA-Ca (Occupational Safety & Health Administration)**

|           |         |
|-----------|---------|
| 7440-38-2 | arsenic |
|-----------|---------|

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### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 3 (Self-assessment): extremely hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system, even in small quantities.*  
*Danger to drinking water if even extremely small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |                        |
|--|------------------------|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>  | <i>not regulated</i>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>                            | <i>not regulated</i>   |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | <i>not regulated</i>   |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>   | <i>not regulated</i>   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                | <i>No</i>              |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>  | <i>Not applicable.</i> |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>                   | <i>Not applicable.</i> |

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|                          |               |
|--------------------------|---------------|
| · UN "Model Regulation": | not regulated |
|--------------------------|---------------|

### 15 Regulatory information

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

|   |  |
|---|--|
| · Section 355 (extremely hazardous substances): |  |
|---|--|

|           |                |
|-----------|----------------|
| 7723-14-0 | red phosphorus |
|-----------|----------------|

|   |  |
|---|--|
| · Section 313 (Specific toxic chemical listings): |  |
|---|--|

|           |         |
|-----------|---------|
| 7440-38-2 | arsenic |
|-----------|---------|

|           |                |
|-----------|----------------|
| 7723-14-0 | red phosphorus |
|-----------|----------------|

|           |           |
|-----------|-----------|
| 7429-90-5 | aluminium |
|-----------|-----------|

|           |          |
|-----------|----------|
| 7440-47-3 | chromium |
|-----------|----------|

|           |      |
|-----------|------|
| 7439-92-1 | lead |
|-----------|------|

|           |           |
|-----------|-----------|
| 7439-96-5 | manganese |
|-----------|-----------|

|           |        |
|-----------|--------|
| 7440-02-0 | nickel |
|-----------|--------|

|           |          |
|-----------|----------|
| 7440-62-2 | vanadium |
|-----------|----------|

|           |        |
|-----------|--------|
| 7440-50-8 | copper |
|-----------|--------|

|  |  |
|--|--|
| · TSCA (Toxic Substances Control Act): |  |
|--|--|

|                             |  |
|-----------------------------|--|
| All ingredients are listed. |  |
|-----------------------------|--|

|                  |  |
|------------------|--|
| · Proposition 65 |  |
|------------------|--|

|                                    |  |
|------------------------------------|--|
| · Chemicals known to cause cancer: |  |
|------------------------------------|--|

|           |         |
|-----------|---------|
| 7440-38-2 | arsenic |
|-----------|---------|

|           |      |
|-----------|------|
| 7439-92-1 | lead |
|-----------|------|

|           |        |
|-----------|--------|
| 7440-02-0 | nickel |
|-----------|--------|

|   |  |
|---|--|
| · Chemicals known to cause reproductive toxicity for females: |  |
|---|--|

|           |      |
|-----------|------|
| 7439-92-1 | lead |
|-----------|------|

|   |  |
|---|--|
| · Chemicals known to cause reproductive toxicity for males: |  |
|---|--|

|           |      |
|-----------|------|
| 7439-92-1 | lead |
|-----------|------|

|  |  |
|--|--|
| · Chemicals known to cause developmental toxicity: |  |
|--|--|

|           |      |
|-----------|------|
| 7439-92-1 | lead |
|-----------|------|

|                           |  |
|---------------------------|--|
| · Carcinogenic categories |  |
|---------------------------|--|

|   |  |  |
|---|--|--|
| · EPA (Environmental Protection Agency) |  |  |
|---|--|--|

|           |         |   |
|-----------|---------|---|
| 7440-38-2 | arsenic | A |
|-----------|---------|---|

|           |                |   |
|-----------|----------------|---|
| 7723-14-0 | red phosphorus | D |
|-----------|----------------|---|

|           |          |   |
|-----------|----------|---|
| 7440-47-3 | chromium | D |
|-----------|----------|---|

|           |      |    |
|-----------|------|----|
| 7439-92-1 | lead | B2 |
|-----------|------|----|

|           |           |   |
|-----------|-----------|---|
| 7439-96-5 | manganese | D |
|-----------|-----------|---|

|           |        |   |
|-----------|--------|---|
| 7440-50-8 | copper | D |
|-----------|--------|---|

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| · TLV (Threshold Limit Value established by ACGIH)                 |            |    |
|--|------------|----|
| 7440-38-2  | arsenic    | A1 |
| 7429-90-5  | aluminium  | A4 |
| 7440-47-3  | chromium   | A4 |
| 7439-98-7  | molybdenum | A3 |
| 7439-92-1  | lead       | A3 |
| 7440-02-0  | nickel     | A5 |
| · NIOSH-Ca (National Institute for Occupational Safety and Health) |            |    |
| 7440-38-2  | arsenic    |    |
| 7440-02-0  | nickel     |    |

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07   GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

arsenic

lead

nickel

· **Hazard statements**

May cause an allergic skin reaction.

May cause cancer.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

IF ON SKIN: Wash with plenty of water.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Environment protection department.

· **Date of preparation / last revision** 10/19/2015 / 4

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 1A: Carcinogenicity, Hazard Category 1A

Repr. 1A: Reproductive toxicity, Hazard Category 1A

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· **\* Data compared to the previous version altered.**