1. Identification

Product identifier

Product name: Aluminum (pieces)

Internal identification: Replaces M-1000-010

CAS number: 7429-90-5

Recommended use of the chemical and restrictions on use

Application: Exterior surface coating.

Uses advised against: No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Supplier: Kurt J Lesker Company

Manufacturer: Kurt J Lesker Company

1925 Route 51
Jefferson Hills, PA 15025
+1 412-387-9200

Kurt J Lesker Company LTD
United Kingdom
15-16 Burgess Road
Hastings, East Sussex, TN35 4NR
England
Customer Service: +44 (0) 1424 458100
mads@lesker.com

Emergency telephone number

Emergency telephone: North America [USA, Canada, Mexico]: 1-866-519-4752
Mainland China: (+86) 4001 2001 74
Europe: (int'l call prefix)-1-760-476-3961
Asia Pacific: (int'l call prefix)-1-760-476-3960
Middle East & Africa: (int'l call prefix)-1-760-476-3959

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards: Not Classified

Health hazards: Not Classified

Environmental hazards: Not Classified

Label elements

Hazard statements: NC Not Classified

Other hazards
Aluminum (pieces)

This product does not contain any substances classified as PBT or vPvB. Based on available knowledge of this material, it has been determined to be non-hazardous and will not pose a risk to persons or the environment in its provided form. However, any cutting, welding, melting, grinding, or use for deposition will produce dust, fume, or particulates containing component elements of this material. Exposure to these components may present significant health hazards. Note: Fine particulate may be a combustible dust which, when dispersed in air, may present an explosion hazard.

### 3. Composition/Information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>0 - 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (pieces)</td>
<td>CAS number: 7429-90-5</td>
</tr>
<tr>
<td>Classification</td>
<td>Not Classified</td>
</tr>
</tbody>
</table>

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

**Description of first aid measures**

**General information**

If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

**Inhalation**

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.

**Ingestion**

Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.

**Skin Contact**

Rinse with water.

**Eye contact**

Rinse with water. Get medical attention if any discomfort continues.

**Protection of first aiders**

First aid personnel should wear appropriate protective equipment during any rescue.

**Most important symptoms and effects, both acute and delayed**

**General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**

No specific symptoms known.

**Ingestion**

No specific symptoms known.

**Skin contact**

Prolonged contact may cause dryness of the skin.

**Eye contact**

No specific symptoms known. May be slightly irritating to eyes.

**Indication of immediate medical attention and special treatment needed**

**Notes for the doctor**

Treat symptomatically.

### 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**

The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media**

Do not use water, if avoidable.
Aluminum (pieces)

Special hazards arising from the substance or mixture

Specific hazards
Reacts with water. Flammable solid. Dust may form explosive mixture with air. Fire-water runoff in sewers may create fire or explosion hazard.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters
Protective actions during firefighting
Avoid breathing fire gases or vapors. Evacuate area. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated.

Environmental precautions
Avoid discharge into drains or watercourses or onto the ground.

Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions
Keep away from oxidizing materials, heat and flames. Avoid contact with water. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.
Aluminum (pieces)

Storage class: Water-reactive storage.

Specific end use(s)

Specific end use(s): The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Aluminum (pieces)

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction as Al.
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust as Al.
Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m³ respirable fraction A4.

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.

Exposure controls

Protective equipment

Appropriate engineering controls: Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection: Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection: No specific hand protection recommended.

Other skin and body protection: Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures: Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection: Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls: Keep container tightly sealed when not in use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: Solid.

Color: Silver.

Odor: No characteristic odor.

Odor threshold: Not applicable.
Aluminum (pieces)

pH
Not applicable.

Melting point
660°C

Initial boiling point and range
Not available.

Flash point
Not applicable.

Evaporation rate
Not applicable.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits
Not applicable.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
2.70 @ 25°C

Bulk density
Not available.

Solubility(ies)
Insoluble in water.

Partition coefficient
Not applicable.

Auto-ignition temperature
Not applicable.

Decomposition Temperature
Not available.

Viscosity
Not applicable.

Molecular weight
26.98

10. Stability and reactivity

Reactivity
There are no known reactivity hazards associated with this product.

Stability
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of hazardous reactions
Reacts strongly with water. The following materials may react strongly with the product: Oxidizing agents.

Conditions to avoid
Avoid heat, flames and other sources of ignition. Static electricity and formation of sparks must be prevented.

Materials to avoid

Hazardous decomposition products
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Aluminum (pieces)

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation Based on available data the classification criteria are not met.

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitization Based on available data the classification criteria are not met.

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization Based on available data the classification criteria are not met.

Skin sensitization Based on available data the classification criteria are not met.

Germ cell mutagenicity Based on available data the classification criteria are not met.

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity None of the ingredients are listed or exempt.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity Based on available data the classification criteria are not met.

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard Not relevant. Solid.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation No specific symptoms known.

Ingestion No specific symptoms known.

Skin Contact Prolonged contact may cause dryness of the skin.

Eye contact No specific symptoms known.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target Organs No specific target organs known.

12. Ecological Information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity Based on available data the classification criteria are not met.

Persistence and degradability
Aluminum (pieces)

**Persistence and degradability**  Reacts with water.

Bioaccumulative potential

**Bio-Accumulative Potential**  No data available on bioaccumulation.

**Partition coefficient**  Not applicable.

**Mobility in soil**

**Mobility**  No data available.

**Other adverse effects**

**Other adverse effects**  None known.

### 13. Disposal considerations

**Waste treatment methods**

**General information**  The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods**  Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 14. Transport information

**General**  The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

**UN Number**  Not applicable.

**UN proper shipping name**  Not applicable.

**Transport hazard class(es)**  No transport warning sign required.

**Transport labels**  No transport warning sign required.

**DOT transport labels**  No transport warning sign required.

**Packing group**  Not applicable.

**Environmental hazards**

**Environmentally Hazardous Substance**  No.

**Special precautions for user**
Aluminum (pieces)

Based on available knowledge of this material, it has been determined to be non-hazardous and will not pose a risk to persons or the environment in its provided form. However, any cutting, welding, melting, grinding, or use for deposition will produce dust, fume, or particulates containing component elements of this material. Exposure to these components may present significant health hazards. Note: Fine particulate may be a combustible dust which, when dispersed in air, may present an explosion hazard.

DOT TIH Zone
Not applicable.

Transport in bulk according to
Annex II of MARPOL 73/78
and the IBC Code
Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
None of the ingredients are listed or exempt.

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List
None of the ingredients are listed or exempt.
Aluminum (pieces)

Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
None of the ingredients are listed or exempt.

New Jersey "Right To Know" List
None of the ingredients are listed or exempt.

Pennsylvania "Right To Know" List
None of the ingredients are listed or exempt.

Inventories
US - TSCA
None of the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Training advice
Only trained personnel should use this material.

Revision date 5/9/2018
Revision 7
Supersedes date 5/9/2018
SDS No. 4661

End of SDS

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.