SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Skin sensitization : Category 1
Reproductive toxicity : Category 2

GHS label elements
Hazard pictograms : 

Signal Word : Warning
Hazard Statements : H317 May cause an allergic skin reaction.
                   H361 Suspected of damaging fertility or the unborn child.
SAFETY DATA SHEET

METALSTAR SG 07-2006 SILVER

Precautionary Statements:

**Prevention:**
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P363 Wash contaminated clothing before reuse.

**Storage:**
- P405 Store locked up.

**Disposal:**
- P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:
Fatty acids, tall-oil, cobalt salts

**Other hazards**
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Distillates (petroleum), acid-treated middle</td>
<td>64742-13-8</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Distillates (petroleum), straight-run middle</td>
<td>64741-44-2</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, cobalt salts</td>
<td>61789-52-4</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

**General advice:**
Take the victim into fresh air.
Do not leave the victim unattended.
Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.

If inhaled:
- If unconscious, place in recovery position and seek medical advice.
- If symptoms persist, call a physician.

In case of skin contact:
- Wash off immediately with soap and plenty of water.
- If on skin, rinse well with water.

In case of eye contact:
- Immediately flush eye(s) with plenty of water.
  - Flush eyes with water as a precaution.
  - Remove contact lenses.
  - Keep eye wide open while rinsing.
  - If eye irritation persists, consult a specialist.

If swallowed:
- Keep respiratory tract clear.
- Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed:
- May be fatal if swallowed and enters airways.
- May cause an allergic skin reaction.
- Suspected of damaging fertility or the unborn child.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
- Dry sand
- ABC powder
- Foam

Unsuitable extinguishing media:
- High volume water jet

Specific hazards during fire fighting:
- Do not allow run-off from fire fighting to enter drains or water courses.

Further information:
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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Special protective equipment for fire-fighters:
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Evacuate personnel to safe areas.
Use personal protective equipment.

Environmental precautions:
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
Use mechanical handling equipment.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Do not flush with water.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion:
Normal measures for preventive fire protection.

Advice on safe handling:
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage:
Earthing of containers and apparatuses is essential.
Reaction with water liberates extremely flammable gas.
(hydrogen)
Take measures to prevent the build up of electrostatic charge.
Use explosion-proof equipment.
Store in original container.
Keep containers tightly closed in a cool, well-ventilated place.
Keep away from sources of ignition - No smoking.
Keep container closed when not in use.

Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Technical measures/Precautions: Protect from humidity and water.

Materials to avoid: Do not store near acids.
Do not store together with oxidizing and self-igniting products.
Never allow product to get in contact with water during storage.
Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Further information on storage stability: No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>TWA (total dust)</td>
<td>50 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable)</td>
<td>5 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total dust)</td>
<td>15 mg/m3</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>5 mg/m3</td>
<td>OSHA Z-3</td>
</tr>
</tbody>
</table>
## Hazardous components without workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>TWA</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), acid-treated middle</td>
<td>64742-13-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), straight-run middle</td>
<td>64741-44-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>TWA</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, tall-oil, cobalt salts</td>
<td>61789-52-4</td>
<td>0.02 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
Personal protective equipment

Respiratory protection : Use suitable breathing protection if workplace concentration requires.

Hand protection

Material : Solvent-resistant gloves (butyl-rubber)

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Goggles

Safety glasses

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
Color : silver
Odor : characteristic
Odor Threshold : No data available
pH : No data available
Melting point/freezing point : No data available
Boiling point/boiling range : > 260 °C
Flash point : > 100 °C
Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Vapor pressure: No data available
Relative density: No data available
Density: 1.1 - 1.2 g/cm³
Solubility(ies): No data available
Partition coefficient: n-octanol/water: No data available
Autoignition temperature: No data available
Decomposition temperature: No data available
Viscosity
  Viscosity, kinematic: > 22 mm²/s (40 °C)

SECTION 10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.
Chemical stability: No decomposition if stored and applied as directed.
Possibility of hazardous reactions: Contact with acids and alkalis may release hydrogen.
Stable under recommended storage conditions.
Conditions to avoid: Do not allow evaporation to dryness.
Incompatible materials: Acids
                        Bases
                        Oxidizing agents

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.
Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC
Group 2B: Possibly carcinogenic to humans
Fatty acids, tall-oil, cobalt salts 61789-52-4

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Suspected of damaging fertility or the unborn child.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
May be fatal if swallowed and enters airways.

Further information

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available
Bioaccumulative potential
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. In accordance with local and national regulations.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations
Remarks: Not classified as dangerous in the meaning of transport regulations.

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

Domestic regulation

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Respiratory or skin sensitization
Reproductive toxicity
Aspiration hazard

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

- Aluminum 7429-90-5 >= 10 - < 20 %
- Fatty acids, tall-oil, cobalt salts 61789-52-4 >= 1 - < 5 %

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
  - Fatty acids, tall-oil, cobalt salts 61789-52-4 1.215 %
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.

US State Regulations
Massachusetts Right To Know
- Aluminum 7429-90-5
- Soybean oil 8001-22-7
- Tung oil 8001-20-5
- Formaldehyde, polymer with dimethylbenzene and 4-(1,1-dimethylethyl)phenol 60806-48-6
- Petroleum resins 64742-16-1

Pennsylvania Right To Know
- Aluminum 7429-90-5
- Not Assigned
<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean oil</td>
<td>8001-22-7</td>
</tr>
<tr>
<td>Tung oil</td>
<td>8001-20-5</td>
</tr>
<tr>
<td>Distillates (petroleum), acid-treated middle</td>
<td>64742-13-8</td>
</tr>
<tr>
<td>Distillates (petroleum), straight-run middle</td>
<td>64741-44-2</td>
</tr>
<tr>
<td>Soybean oil, polymer with glycerol and isophthalic acid</td>
<td>66070-91-5</td>
</tr>
<tr>
<td>Formaldehyde, polymer with dimethylbenzene and 4-(1,1-dimethylethyl)phenol</td>
<td>Not Assigned</td>
</tr>
<tr>
<td>Petroleum resins</td>
<td>64742-16-1</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, cobalt salts</td>
<td>61789-52-4</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated middle</td>
<td>64742-46-7</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, manganese salts</td>
<td>8030-70-4</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
</tr>
</tbody>
</table>

**California Prop. 65**

**WARNING:** This product can expose you to chemicals including lead and cadmium, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

**WARNING:** This product can expose you to chemicals including Distillates (petroleum), hydrotreated middle, Distillates (petroleum), hydrotreated light, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

**California List of Hazardous Substances**

- Aluminum: 7429-90-5

**California Permissible Exposure Limits for Chemical Contaminants**

- Aluminum: 7429-90-5

The ingredients of this product are reported in the following inventories:

- DSL: This product contains one or several components listed in the...
Canadian NDSL.

TSCA : On TSCA Inventory

EINECS : On the inventory, or in compliance with the inventory

**TSCA list**
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**SECTION 16. OTHER INFORMATION**

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average

OSHA Z-1 / TWA : 8-hour time weighted average

OSHA Z-3 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships;
Revision Date: 03/27/2018

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text. 

US / Z8