

SAFETY DATA SHEET

1. Identification

Product identifier Aluma Shield

Other means of identification

SDS number SDS-00012

Product code * See Section 16

Recommended use Lubricant, Grease and Release Product, Sealant

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Thomas & Betts Corporation

Address 8155 T & B Boulevard
Memphis, TN 38125
US

Telephone 901-252-5000 ext.8324

E-mail Not available.

Emergency phone number For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
+1 703-741-5970

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Very toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Mixtures

| Chemical name | CAS number | % |
|---------------|------------|-------|
| ZINC (POWDER) | 7440-66-6 | 45-55 |

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

| | |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Most important symptoms/effects, acute and delayed | Direct contact with eyes may cause temporary irritation. |
| Indication of immediate medical attention and special treatment needed | Treat symptomatically. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |
| 5. Fire-fighting measures | |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | Water. Do not use water jet as an extinguisher, as this will spread the fire. Dousing metallic fires with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

| | |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

| | |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling | Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing promptly. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using the product. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash thoroughly after handling. |
| Conditions for safe storage, including any incompatibilities | Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children. |

8. Exposure controls/personal protection

| | |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Occupational exposure limits | No exposure limits noted for ingredient(s). |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Exposure guidelines | Occupational Exposure Limits are not relevant to the current physical form of the product. |
| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin protection | |
| Hand protection | Wear appropriate chemical resistant gloves. Nitrile gloves are recommended. |

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin protection | |
| Other | Wear suitable protective clothing. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

9. Physical and chemical properties

Appearance

| | |
|------------------------------------------------|-------------------------|
| Physical state | Liquid. |
| Form | Semifluid. Gel. |
| Color | Gray. |
| Odor | Petroleum-like. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | > 572 °F (> 300 °C) |
| Initial boiling point and boiling range | > 572 °F (> 300 °C) |
| Flash point | > 572.0 °F (> 300.0 °C) |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |

Upper/lower flammability or explosive limits

| | |
|---------------------------------------|----------------|
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |

Vapor pressure Not available.

Vapor density Not available.

Relative density 1.63

Solubility(ies)

Solubility (water) Negligible.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Reacts slowly with water.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Oxidizing acids.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|----------------------------------------------------------|
| Inhalation | No adverse effects due to inhalation are expected. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Expected to be a low ingestion hazard. |

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

| Product | Species | Test Results |
|----------------------------|----------------|-------------------------------------|
| Aluma Shield (CAS Mixture) | | |
| Acute | | |
| <i>Oral</i> | | |
| LD50 | | 5575 mg/kg, Acute Toxicity estimate |

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Further information This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

| Components | Species | Test Results |
|-------------------------------|----------------|-------------------------------------------------------------------|
| ZINC (POWDER) (CAS 7440-66-6) | | |
| Aquatic | | |
| Algae | EC50 | Pseudokirchneriella subcapitata 0.09 - 0.125 mg/l, 72 hours |
| Crustacea | EC50 | Water flea (Daphnia magna) 0.139 - 0.908 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) 0.211 - 0.269 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.
This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.

IATA

UN number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. (ZINC (POWDER))
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards YES
ERG Code 9L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC (POWDER))
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant YES
EmS F-A, S-F
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

ZINC (POWDER) (CAS 7440-66-6) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---------------|------------|----------|
| ZINC (POWDER) | 7440-66-6 | 45-55 |

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

ZINC (POWDER) (CAS 7440-66-6)

US. New Jersey Worker and Community Right-to-Know Act

ZINC (POWDER) (CAS 7440-66-6)

US. Pennsylvania Worker and Community Right-to-Know Law

ZINC (POWDER) (CAS 7440-66-6)

US. Rhode Island RTK

ZINC (POWDER) (CAS 7440-66-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|-----------------------------------------------|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Issue date | 17-December-2015 |
| Revision date | 04-May-2016 |
| Revision # | 3 |
| Further information | HMIS Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe X - Consult your supervisor of S.O.P. for "SPECIAL" handling directions |
| HMIS® ratings | Health: 0 Flammability: 1 Physical hazard: 0 Personal protection: X |

NFPA ratings

List of abbreviations

DOT: Department of Transportation.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 HMIS: Hazardous Materials Identification System.
 NFPA: National Fire Protection Association.
 CAS Number: Chemical Abstracts Service Registry Number.
 LC50: Lethal concentration 50% (concentration that kills 50% of test animals).
 EC50: (Effective Concentration – 50%) The concentration that will produce a 50% in vivo inhibition of a biological or biochemical effect, in the test organisms or animals.
 MARPOL: International Convention for the Prevention of Pollution from Ships.

Disclaimer

Thomas & Betts Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

*** Product Codes**

| | | | | | |
|-------|----------|---------|-----------|----------|---------------|
| 21059 | 3LM93 | 60120 | 60171NT | 60284 | ATL10-38 |
| AP8 | 3LM94 | 60120BT | 60171UF | 60500-TB | ATL10-38-B1-6 |
| M-53 | 3LM95 | 60122 | 60172 | 60501-TB | ATL1-38-B1-6 |
| 1XPZ5 | 3LM96 | 60123 | 60174 | 60507-TB | ATL20-12 |
| 1XPZ6 | 3LM97 | 60124 | 60174NT08 | 60512 | ATL20-12-B1 |
| 1XPZ7 | 3LN04 | 60126 | 60176 | 60516 | ATL20-38 |
| 1XPZ8 | 3LN05 | 60128 | 60178 | 60522-TB | ATL20-38-B1-6 |
| 1XPZ9 | 3LN06 | 60129 | 60230 | 60530-TB | ATL2-14 |
| 1XRA1 | 3LN07 | 60130 | 60236 | 60536 | ATL2-38 |
| 1XRA2 | 3LN08 | 60132 | 60238 | 60542 | ATL2-38-B1 |
| 1XRA3 | 3LN09 | 60134 | 60242 | 60548 | ATL2-38-B1-6 |
| 1XRA4 | 3LN10 | 60135 | 60244 | 60554 | ATL2-38-B2 |
| 1XRA5 | 3LN11 | 60136 | 60248 | 60560 | ATL250-12 |
| 1XRA6 | 3LN12 | 60136G | 60250 | 60565 | ATL2502 |
| 1XRA7 | 3LN13 | 60138 | 60254 | 60568 | ATL2-516 |
| 1XRA8 | 60096 | 60140 | 60256 | 60571 | ATL30-12 |
| 3LM77 | 60097 | 60141 | 60262 | 60574 | ATL30-38 |
| 3LM78 | 60099 | 60142 | 60265 | 60576 | ATL30-38-B1-6 |
| 3LM79 | 60101-TB | 60144 | 60267 | 60578 | ATL350-12 |
| 3LM80 | 60102-TB | 60147 | 60269 | 60584 | ATL3502 |
| 3LM81 | 60103-TB | 60148 | 60271 | 6MFT9 | ATL4-14 |
| 3LM82 | 60104-TB | 60150 | 60273 | ASP1 | ATL4-38 |
| 3LM83 | 60106-TB | 60151 | 60273BT | ASP10 | ATL4-516-B1-6 |
| 3LM84 | 60107-TB | 60154 | 60273N | ASP2 | ATL5002 |
| 3LM85 | 60108-TB | 60156 | 60273NT | ASP20 | ATL6002 |
| 3LM86 | 60109-TB | 60157 | 60274 | ASP250 | ATL6-10-B1-6 |
| 3LM87 | 60112-TB | 60160 | 60275 | ASP30 | ATL6-14 |
| 3LM88 | 60113-TB | 60162 | 60275NT | ASP300 | ATL7502 |
| 3LM89 | 60114-TB | 60165 | 60276 | ASP4 | ATL8-10-B1-6 |
| 3LM90 | 60116-TB | 60166 | 60278 | ASP40 | 60277 |
| 3LM91 | 60117-TB | 60168 | 60278N | ASP6 | |
| 3LM92 | 60118-TB | 60171 | 60278NT | ASP8 | |