SAFETY DATA SHEET



RelaTECH Aluminum Complex Grease EP-1

Section 1. Identification

GHS product identifier : RelaTECH Aluminum Complex Grease EP-1

Other means of identification

: Not available.

Product type : Solid.

 Product code
 : ALN16030A0

 SDS #
 : 951720001QC

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

Product use: For professional use only.

: Industrial applications: Lubricants; grease

Supplier's details : RelaDyne, LLC

8280 Montgomery Road,

Suite 101

Cincinnati, OH 45236 888-830-3156 www.reladyne.com

Emergency telephone

number

: INFOTRAC

U.S. and Canada - 800.535.5053

Outside the U.S. and Canada - +1 352.323.3500

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 3.9%

GHS label elements

Hazard pictograms



Signal word : Warning

Hazard statements : Causes serious eye irritation.

Precautionary statements

Prevention: Wear eye or face protection. Wash hands thoroughly after handling.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Section 2. Hazards identification

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise : None known.

classified

Eye contact

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of : Not available.
identification

CAS number/other identifiers

Ingredient name	%	CAS number
Distillates (petroleum), solvent-dewaxed heavy paraffinic	10-30	64742-65-0
White mineral oil (petroleum)	1-5	8042-47-5
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	0.5-1.5	68649-42-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

description of necessary list aid measures

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention.

Inhalation
 Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar,

tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean

shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion:

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and

keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.
 Skin contact : No known significant effects or critical hazards.
 Ingestion : No known significant effects or critical hazards.

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Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may

be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Insuitable extinguishing

Unsuitable extinguishing media

Specific hazards arising

from the chemical

Hazardous thermal

decomposition products

Special protective actions for fire-fighters

Special protective equipment for fire-fighters

: Use an extinguishing agent suitable for the surrounding fire.

: None known.

: No specific fire or explosion hazard.

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

: Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill

: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ACGIH TLV (United States, 4/2014).
	TWA: 5 mg/m ³ 8 hours. Form: Inhalable
	fraction
	NIOSH REL (United States, 10/2013).
	TWA: 5 mg/m ³ 10 hours. Form: Mist
	STEL: 10 mg/m³ 15 minutes. Form: Mist
	OSHA PEL (United States, 2/2013).
	TWA: 5 mg/m ³ 8 hours.
White mineral oil (petroleum)	ACGIH TLV (United States, 4/2014).
	TWA: 5 mg/m ³ 8 hours. Form: Inhalable
	fraction
	NIOSH REL (United States, 10/2013).
	TWA: 5 mg/m ³ 10 hours. Form: Mist
	STEL: 10 mg/m³ 15 minutes. Form: Mist
	OSHA PEL (United States, 2/2013).
	TWA: 5 mg/m ³ 8 hours.

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>

Physical state : Solid. [grease]

Color : Clear.

Odor : Petroleum oil
Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Flammable in the presence of the following materials or conditions: open flames, sparks

and static discharge.

Lower and upper explosive

(flammable) limits

: Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.9 g/cm³

Solubility : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-

octanol/water

: Not available.

Auto-ignition temperature: Not available.

Section 9. Physical and chemical properties

Decomposition temperature : Not available.

Kinematic (40°C (104°F)): >0.21 cm²/s (>21 cSt) **Viscosity**

Section 10. Stability and reactivity

Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

: The product is stable.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

No specific data.

Incompatible materials

: No specific data.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
White mineral oil (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary

No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Eyes : Causes eye irritation.

Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin

: No specific information is available in our database regarding the skin sensitizing

properties of this product. Sensitization not suspected for humans.

Respiratory : Sensitization not suspected for humans.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself. Mutagenicity not suspected for

humans.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself. Carcinogenicity not suspected for

humans.

Reproductive toxicity

Conclusion/Summary There are no data available on the mixture itself. Not considered to be dangerous to

humans, according to our database.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself. Teratogenicity not suspected for

humans.

Specific target organ toxicity (single exposure)

Not available.

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Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
" "	ASPIRATION HAZARD - Category 1
White mineral oil (petroleum)	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

: Routes of entry anticipated: Oral, Dermal.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation
 Skin contact
 No known significant effects or critical hazards.
 Ingestion
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation: No specific data.Skin contact: No specific data.Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary
 General
 No known significant effects or critical hazards.
 Carcinogenicity
 No known significant effects or critical hazards.
 Mutagenicity
 No known significant effects or critical hazards.
 Teratogenicity
 No known significant effects or critical hazards.
 Developmental effects
 No known significant effects or critical hazards.
 Fertility effects
 No known significant effects or critical hazards.
 No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
Oral	275561.8 mg/kg

Section 12. Ecological information

Toxicity

Conclusion/Summary

: There are no data available on the mixture itself.

Persistence and degradability

Conclusion/Summary

: This product has not been tested for biodegradation. Not expected to be rapidly degradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ACG EP-1	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
White mineral oil (petroleum)	>6	-	high

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-

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Section 14. Transport information

Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	•

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 8(a) PAIR: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc

salts; zinc bis(dipentyldithiocarbamate) Clean Water Act (CWA) 311: benzoic acid

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Not listed

Clean Air Act Section 602

Class I Substances

: Not listed

Clean Air Act Section 602

Class II Substances

: Not listed

DEA List I Chemicals

(Precursor Chemicals)

: Not listed

DEA List II Chemicals

(Essential Chemicals)

: Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

: Immediate (acute) health hazard Classification

Composition/information on ingredients

Name	%	hazard	Sudden release of pressure	Reactive	(acute)	Delayed (chronic) health hazard
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	0.5-1.5	No.	No.	No.	Yes.	No.

SARA 313

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Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	0.5-1.5
Supplier notification	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	0.5-1.5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Connecticut Carcinogen Reporting : None of the components are listed. **Connecticut Hazardous Material Survey** : None of the components are listed. Florida substances : None of the components are listed. **Illinois Chemical Safety Act** None of the components are listed. : None of the components are listed.

Illinois Toxic Substances Disclosure to Employee

Act

Louisiana Reporting None of the components are listed. **Louisiana Spill** None of the components are listed. **Massachusetts Spill** None of the components are listed. **Massachusetts Substances** None of the components are listed. **Michigan Critical Material** None of the components are listed. **Minnesota Hazardous Substances** None of the components are listed.

New Jersey Spill None of the components are listed. **New Jersey Toxic Catastrophe Prevention Act** None of the components are listed.

The following components are listed: ZINC compounds **New Jersey Hazardous Substances**

New York Acutely Hazardous Substances None of the components are listed. **New York Toxic Chemical Release Reporting** None of the components are listed.

Rhode Island Hazardous Substances None of the components are listed.

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	•	level	Maximum acceptable dosage level
crystalline silica, non-respirable	Yes.	No.	No.	No.

The following components are listed: ZINC COMPOUNDS

International regulations

Chemical Weapon Convention List Schedules I. II & III Chemicals

Not listed.

Montreal Protocol (Annexes A. B. C. E)

Pennsylvania RTK Hazardous Substances

Not listed.

International lists

National inventory

Australia : All components are listed or exempted. China : All components are listed or exempted. **Europe** : All components are listed or exempted.

Japan : Not determined.

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Section 15. Regulatory information

Malaysia : Not determined.

New Zealand : Not determined.

Philippines : All components are listed or exempted.

Republic of Korea : Not determined.

Taiwan : Not determined.

Canada

WHMIS (Canada)
: Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : The following components are listed: Zinc (and its compounds)

CEPA Toxic substances : None of the components are listed.

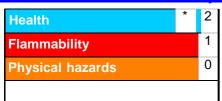
Canada inventory; DSL/ : All components are listed or exempted.

NDSL

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue/Date of : 12/16/2015

revision

Date of previous issue : No previous validation

Version : 1

Section 16. Other information

Key to abbreviations

: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Notice to reader

This Safety Data Sheet is prepared according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012. The information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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