



### SECTION 1: Identification of the hazardous chemical or mixture and of the supplier or manufacturer

#### 1.1. GHS product identifier

Product form : Mixture  
Trade name : SHELL GADUS (Railmaster LFG EP 1.5)

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

No additional information available

#### 1.4. Supplier's details

##### Manufacturer

Shell & Whitmore Reliability Solutions, LLC  
930 Whitmore Drive  
Rockwall, Texas, 75087  
USA  
T 1.800.381.6585 or 1.972.771.1000

#### 1.5. Emergency phone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week  
Within USA and Canada: 1.800.424.9300  
Outside USA and Canada: +1.703.527.3887  
(collect calls accepted)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS MX classification

Serious eye damage/eye irritation, Category 2 H319 Causes serious eye irritation.  
Full text of H-statements: see section 16

#### 2.2. Label elements

##### GHS MX labelling

Hazard pictograms (GHS MX) :



Signal word (GHS MX) : Warning  
Hazard statements (GHS MX) : H319 - Causes serious eye irritation.  
Precautionary statements (GHS MX) : P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical advice/attention.

#### 2.3. Other hazards which do not result in classification

Adverse physicochemical, human health and environmental effects : Causes serious eye irritation. To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice

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According to the NOM-018-STPS-2015

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS MX classification
chalk	CAS-No.: 1317-65-3	> 3.8024	Acute Tox. 5 (Dermal), H313
Bis(2-ethylhexyl) phosphorodithioate Zinc Salt	CAS-No.: 4259-15-8	≤ 2.5	Acute Tox. 5 (Oral), H303 Eye Dam. 1, H318 Aquatic Acute 3, H402
graphite	CAS-No.: 7782-42-5	1	Aquatic Acute 2, H401 Aquatic Chronic 2, H411

### SECTION 4: First aid measures

#### 4.1. Description of necessary first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after eye contact	: Eye irritation.
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#### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
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#### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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#### 5.3. Special protective actions for fire-fighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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### SECTION 6: Measures to be taken in case of accidental spillage or accidental leakage

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures	: Exercise caution. Spill area may be slippery. Avoid contact with skin and eyes.
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##### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.  
Other information : Dispose of materials or solid residues at an authorized site.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

graphite (7782-42-5)

#### Mexico - Occupational Exposure Limits

Local name	Grafito
OEL TWA [1]	2 mg/m <sup>3</sup> todas sus formas, excepto fibras de grafito; Fracción respirable
Remark (MX)	Neumoconiosis
Regulatory reference	NOM-010-STPS-2014

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Neoprene or nitrile rubber gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR), Neoprene rubber (HNBR)	2 (> 30 minutes)	0.3 mm - 0.6 mm		

Eye protection : Wear eye protection  
Skin and body protection : Wear suitable protective clothing  
Respiratory protection : No respiratory protection needed under normal use conditions

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Colour : Grey  
Odour : petroleum-like odour  
Odour threshold : No data available  
pH : No data available  
Relative evaporation rate (butylacetate=1) : No data available

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Melting point	: 194 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Non flammable.
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: No data available
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: 249 mm <sup>2</sup> /s @ 40°C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content : < 0.1 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)

LD50 oral rat	3100 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE MX (oral)	3100 mg/kg bodyweight

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chalk (1317-65-3)	
LD50 oral rat	6450 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 2000 mg/kg
ATE MX (oral)	6450 mg/kg bodyweight
ATE MX (dermal)	2500 mg/kg bodyweight

graphite (7782-42-5)	
LD50 oral rat	> 2000 mg/kg (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral)
LC50 Inhalation - Rat	> 2000 mg/m <sup>3</sup> air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust))
LC50 Inhalation - Rat (Dust/Mist)	> 2 mg/l Source: ECHA
Skin corrosion/irritation	: Not classified

chalk (1317-65-3)	
pH	8.5 – 9

graphite (7782-42-5)	
pH	7 (1.3 %)
Serious eye damage/irritation	: Causes serious eye irritation.

chalk (1317-65-3)	
pH	8.5 – 9

graphite (7782-42-5)	
pH	7 (1.3 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)	
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

graphite (7782-42-5)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.000279 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
Aspiration hazard	: Not classified

SHELL GADUS (Railmaster LFG EP 1.5)	
Viscosity, kinematic	249 mm <sup>2</sup> /s @ 40°C

Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)	
Viscosity, kinematic	131.6 mm <sup>2</sup> /s (40 °C, ASTM D445: Capillary viscometer)
Animal studies and expert judgment for classification	False

chalk (1317-65-3)	
Viscosity, kinematic	Not applicable
Animal studies and expert judgment for classification	False

graphite (7782-42-5)	
Animal studies and expert judgment for classification	False

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

#### Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)

LC50 - Fish [1]	46 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinodon variegatus, Semi-static system, Fresh water, Experimental value, GLP)
LC50 - Fish [2]	46 mg/l Test organisms (species):

#### graphite (7782-42-5)

LC50 - Fish [1]	> 100 mg/l
EC50 - Crustacea [1]	> 100 mg/l
ErC50 algae	> 100 mg/l
EC50 72h - Algae [1]	19 mg/l
EC50 72h - Algae [2]	7.2 mg/l
NOEC (chronic)	47 mg/l

#### 12.2. Persistence and degradability

#### Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)

Persistence and degradability	Not readily biodegradable in water.
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#### chalk (1317-65-3)

Not rapidly degradable	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

#### graphite (7782-42-5)

Not rapidly degradable

#### 12.3. Bioaccumulative potential

#### Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)

Partition coefficient n-octanol/water (Log Pow)	3.59 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

#### 12.4. Mobility in soil

#### Bis(2-ethylhexyl) phosphorodithioate Zinc Salt (4259-15-8)

Surface tension	63.7 mN/m (21 °C, 1.25 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	Low potential for adsorption in soil.

#### chalk (1317-65-3)

Ecology - soil	No (test) data on mobility of the substance available.
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### 12.5. Other adverse effects

Ozone : Not classified

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with NOM / UN RTDG / IMDG / IATA

NOM	UN RTDG	IMDG	IATA
<b>14.1. UN number</b>			
Not regulated for transport			
<b>14.2. Proper Shipping Name</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

### 14.6. Special precautions for user

#### NOM

No data available

#### UN RTDG

No data available

#### IMDG

No data available

#### IATA

No data available

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### chalk (1317-65-3):

Listed in the INSQ (National Inventory of Chemical Substances)

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### graphite (7782-42-5):

Listed in the INSQ (National Inventory of Chemical Substances)

### 15.2. International regulations

#### chalk (1317-65-3):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian NDSL (Non-Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### graphite (7782-42-5):

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the Canadian DSL (Domestic Substances List)

## SECTION 16: Other information including those related to the preparation and updating of safety data sheets

Issue date : 25/08/2021  
Revision date : 26/08/2022  
Supersedes : 02/08/2022

### Full text of H-statements

H303	May be harmful if swallowed
H313	May be harmful in contact with skin
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), Mexico

This 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.