

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
Product name : Develon NLGI 2 EP Grease

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Develon
2905 Shawnee Industrial Way
Suwanee, GA 30024
USA
T (678) 714-6000

1.4. Emergency telephone number

Emergency number : 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS US classification**

Hazardous to the aquatic environment – Acute Hazard Category 3	H402	Harmful to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements**GHS US labeling**

Hazard statements (GHS US) : H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) : P273 - Avoid release to the environment.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients**3.1. Substances**

Not applicable

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3.2. Mixtures

Name	Product identifier	%	GHS US classification
MINERAL OIL	CAS-No.: MIXTURE	60 - 80	Not classified
MOLYBDENUM DISULPHIDE	CAS-No.: 1317-33-5	1 - 5	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
ZINC ALKYL DITHIOPHOSPHATE	CAS-No.: 68457-79-4	1 - 4	Skin Irrit. 2, H315 Eye Dam. 1, H318
PHOSPHORIC ACID ESTERS/ AMINE SALT	CAS-No.: TRADE SECRET	0.1 - 1	Not classified

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a poison center/doctor/physician if you feel unwell. First aider: Pay attention to self-protection.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Seek medical attention if ill effect or irritation develops.
First-aid measures after skin contact	: Seek medical attention if ill effect or irritation develops. Wash skin with plenty of water.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth. If you feel unwell, seek medical advice.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: vapors may cause fire/explosion if source of ignition is present. Watch out for invisible flames. The vapors are denser than air and may travel along the ground. Distance ignition possible.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Evacuate area. Use water spray or fog for cooling exposed containers. Do not allow water to enter the vessels, a violent reaction may occur. Eliminate all ignition sources if safe to do so. Fight fire from safe distance and protected location. In case of fire: Stop leak if safe to do so.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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Other information : High temperature decomposition products are harmful by inhalation. On exposure to high temperature, may decompose, releasing toxic gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Clean up any spills as soon as possible, using an absorbent material to collect it. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Eliminate every possible source of ignition. Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Avoid contact with skin, eyes and clothing. Wear recommended personal protective equipment.

Emergency procedures : Evacuate unnecessary personnel. Do not breathe vapors. No open flames, no sparks, and no smoking.

6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.2. Environmental precautions

Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Stop leak, if possible without risk. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation. Clear up rapidly by scoop or vacuum.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Do not breathe vapors. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Handling temperature : ≤ 140 °F

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wear personal protective equipment. Take off immediately all contaminated clothing and wash it before reuse. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Keep only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	5 mg/m ³ Contains highly refined petroleum oil
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USA - OSHA - Occupational Exposure Limits

OSHA PEL TWA	5 mg/m ³ Contains highly refined petroleum oil
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OSHA PEL STEL	10 mg/m ³ Contains highly refined petroleum oil
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MOLYBDENUM DISULPHIDE (1317-33-5)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	3 mg/m ³ (Respirable fraction) 10 mg/m ³ (Inhalable fraction)
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8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

Protective gloves. nitrile rubber gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing. Wear impervious rubber safety shoes. Chemical resistant apron

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Black Gray
Odor : petroleum-like odor

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Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 204 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor 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
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 22 mm ² /s @ 100°C
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

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

None under normal use.

10.4. Conditions to avoid

High temperature.

10.5. Incompatible materials

Acids. Oxidizing agent.

10.6. Hazardous decomposition products

fume. Carbon dioxide. Carbon monoxide.

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

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MOLYBDENUM DISULPHIDE (1317-33-5)	
LD50 dermal rabbit	> 2000 mg/kg Source: ChemIDplus
LC50 Inhalation - Rat	> 2820 mg/m ³
ATE US (dust, mist)	1.5 mg/l/4h

ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)	
LD50 dermal rabbit	> 20000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)
ATE US (oral)	3600 mg/kg body weight

Skin corrosion/irritation : Not classified

MOLYBDENUM DISULPHIDE (1317-33-5)	
pH	5 – 8 (10 %)

Serious eye damage/irritation : Not classified.

MOLYBDENUM DISULPHIDE (1317-33-5)	
pH	5 – 8 (10 %)

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)	
NOAEL (oral,rat,90 days)	160 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified

Viscosity, kinematic : 22 mm²/s @ 100°C

ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)	
Viscosity, kinematic	264.8 mm ² /s (40 °C, ASTM D445: Capillary viscometer)

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Develon NLGI 2 EP Grease	
LC50 - Fish [1]	> 100 mg/l
LC50 - Other aquatic organisms [1]	> 100 mg/l

ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)	
LC50 - Fish [1]	46 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinodon variegatus, Semi-static system, Marine water, Experimental value, GLP)

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12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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MINERAL OIL (MIXTURE)

Persistence and degradability	Not rapidly degradable
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MOLYBDENUM DISULPHIDE (1317-33-5)

Persistence and degradability	Biodegradability: not applicable.
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Chemical oxygen demand (COD)	Not applicable
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ThOD	Not applicable
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BOD (% of ThOD)	Not applicable
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ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)

Persistence and degradability	Not readily biodegradable in water.
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PHOSPHORIC ACID ESTERS/ AMINE SALT (TRADE SECRET)

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

MOLYBDENUM DISULPHIDE (1317-33-5)

Bioaccumulative potential	No bioaccumulation data available.
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ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)

Partition coefficient n-octanol/water (Log Pow)	0.69 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 21.8 °C)
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Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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12.4. Mobility in soil

MOLYBDENUM DISULPHIDE (1317-33-5)

Ecology - soil	Adsorbs into the soil.
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ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)

Surface tension	61.1 mN/m (21 °C, 1.25 g/l, EU Method A.5: Surface tension)
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Ecology - soil	No (test)data on mobility of the substance available.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.

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Product/Packaging disposal recommendations : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

Additional information : Clean up even minor leaks or spills if possible without unnecessary risk. Do not re-use empty containers.

Ecological information : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

DOT NA No : Not regulated

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not regulated

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not regulated

14.4. Packing group

Packing group (DOT) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

Not regulated

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. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
MINERAL OIL	MIXTURE	Not present	-	
MOLYBDENUM DISULPHIDE	1317-33-5	Present	Active	
ZINC ALKYL DITHIOPHOSPHATE	68457-79-4	Present	Active	
PHOSPHORIC ACID ESTERS/ AMINE SALT	TRADE SECRET	Not present	-	

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15.2. International regulations

CANADA

MOLYBDENUM DISULPHIDE (1317-33-5)

Listed on the Canadian DSL (Domestic Substances List)

ZINC ALKYL DITHIOPHOSPHATE (68457-79-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

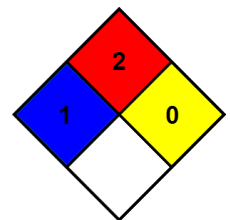
SECTION 16: Other information

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Full text of H-phrases

H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

- NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.
- NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
- Personal protection : B - Safety glasses, Gloves

Safety Data Sheet (SDS), USA

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.