



**P2AO-Mineral Series**  
(P2AO60-HT300-LT200-AR465-AR456-PS207-DM220)  
**SAFETY DATA SHEET**  
OSHA HCS (29 CFR 1910.1200)

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier**

Chemical Name Not applicable  
Trade name P2AO-Ester Series  
CAS No. Mixture  
EINECS No. Mixture

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

Identified use(s) Synthetic Bearing Lubricant  
Uses advised against None.

**Details of the supplier of the safety data sheet**

Company Identification Permawick Company  
3110 Permawick Drive  
Colombus, IN, 47201  
Telephone (812) 376-0703  
Fax (812) 372-1410  
E-Mail (competent person) sales@permawick.com

**Emergency telephone number**

Emergency Phone No. Monday - Friday, 8 am – 4:30 p.m. (EST) (812) 376-0703  
CHEMTREC 24 hr. (800)424-9300

**SECTION 2: HAZARDS IDENTIFICATION**

**Classification of the substance or mixture**

OSHA HCS (29 CFR 1910.1200) Aquatic Chronic 3

**Label elements**

Hazard Symbol None  
Hazard statement(s) Harmful to aquatic life with long lasting effects.  
Precautionary statement(s) Avoid release to the environment.

**Other hazards**

Not classified as PBT or vPvB.

**Additional Information**

May produce an allergic reaction in persons already sensitised.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous ingredient(s)	%W/W	CAS No.	Hazard statement(s)
tris(methylphenyl) phosphate	0 – 1.0	1330-78-5	Suspected of damaging fertility or the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl-	0 – 0.1	94270-86-7	Causes skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

**Additional Information** - Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below.: None

# P2AO-Mineral Series

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## SECTION 4: FIRST AID MEASURES



### Description of first aid measures

Inhalation	Unlikely to be required but if necessary treat symptomatically.
Skin Contact	Wash affected skin with soap and water.
Eye Contact	Eyes should be washed with plenty of water. If symptoms occur obtain medical attention.
Ingestion	Unlikely to be required but if necessary treat symptomatically.
<b>Most important symptoms and effects, both acute and delayed</b>	None
<b>Indication of the immediate medical attention and special treatment needed</b>	None

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing media

-Suitable Extinguishing Media	Extinguish with waterspray, dry chemical, sand or carbon dioxide.
-Unsuitable Extinguishing Media	None anticipated.

### Special hazards arising from the substance or mixture

This product may give rise to hazardous fumes in a fire.

### Advice for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Avoid skin contact. Avoid contact with eyes.

### Environmental precautions

Use appropriate container to avoid environmental contamination.

### Methods and material for containment and cleaning up

Contain and cover spilled substance with dry sand or earth or other suitable dry material. Transfer to a container for disposal or recovery.

### Reference to other sections

None

### Additional Information

None

## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

Avoid skin contact. Avoid contact with eyes.

### Conditions for safe storage, including any incompatibilities

-Storage Temperature	Store at room temperature.
-Incompatible materials	Strong oxidising agents.

### Specific end use(s)

Lubricating agent

# P2AO-Mineral Series

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Occupational Exposure Limits

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)		STEL (ppm)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
None	----	----	----	----	----	

#### Recommended monitoring method

None

#### Exposure controls

##### Appropriate engineering controls

Not normally required.

##### Personal protection equipment

Eye/face protection

Safety spectacles.



Skin protection (Hand protection/ Other)

Not normally required.



Respiratory protection

Not normally required.



Thermal hazards

Not normally required.

#### Environmental Exposure Controls

Use appropriate container to avoid environmental contamination. Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Viscous liquid.
Colour	Amber, Clear.
Odour	Mild petroleum
Odour Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	Not determined.
Flash Point (°C)	230 - 270 [Open cup]
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Explosive limit ranges	Not applicable
Vapour Pressure (Pascal)	< 1
Vapour Density (Air=1)	> 1
Density (g/ml)	0.82 – 0.85
Solubility (Water)	Insoluble.
Solubility (Other)	Not available

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Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Temperature (°C)	>282
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt) @ 40°C	>20.5 - 150 (Listed in: Product specification)
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
<b>Other information</b>	Not available

## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Stable under normal conditions.
<b>Chemical stability</b>	Stable.
<b>Possibility of hazardous reactions</b>	None anticipated.
<b>Conditions to avoid</b>	None
<b>Incompatible materials</b>	Oxidizers
<b>Hazardous Decomposition Product(s)</b>	Carbon monoxide, Carbon dioxide

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl- (CAS No.94270-86-7)

<b>Acute toxicity</b>	
-Ingestion	No data
-Inhalation	No data
-Dermal	No data
-Irritation	May cause irritation.
<b>Sensitisation</b>	Sensitizer
<b>Repeated dose toxicity</b>	No data
<b>Mutagenicity</b>	No data
<b>Carcinogenicity</b>	No data
<b>Toxicity for reproduction</b>	No data

### Other information

IARC, NTP, OSHA, ACGIH do not list this product or any components thereof as known or suspected carcinogen.

tris(methylphenyl) phosphate (CAS No. 1330-78-5)

<b>Acute toxicity</b>	
-Ingestion	LD50 > 20,000 mg/kg (rat)
-Inhalation	LC50 > 11.1 mg/l (rat) (1 hour(s))
-Dermal	LD50 3.7 g/kg (rabbit)
-Irritation	Slightly irritant (Skin). Non-irritant to rabbit eyes.
<b>Sensitisation</b>	It is not a skin sensitiser.
<b>Repeated dose toxicity</b>	Oral: NOAEL = 1000 mg/kg (rat)
<b>Mutagenicity</b>	Negative
<b>Carcinogenicity</b>	No data
<b>Toxicity for reproduction</b>	Positive
<b>Developmental Toxicity</b>	LOAEL = 20 mg/kg (Developmental) NOEL = 20 mg/kg (Maternal)
<b>Other information</b>	None known

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl- (CAS No.94270-86-7)

<b>Acute toxicity</b>	No data
<b>Long Term</b>	No data

tris(methylphenyl) phosphate (CAS No. 1330-78-5)

<b>Acute toxicity</b>	Fish LC50 = 0.06 mg/l (96 hour) ( <i>Rainbow trout</i> )
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Fish LC50 = 44.8 mg/l (96 hour) (*Fathead minnow*)  
Aquatic invertebrates: EC50 = 146 µg/l (48 hour) (*D. magna*)  
Algae EL50 > 2500 µg/l (72 hour) / (96 hour) (*S. capricornutum*)

## Long Term

Fish Sublethal Effects = 0.9 mg/l (4 week(s)) (*O. mykiss*)  
Aquatic invertebrates: NOEC = 0.011 – 0.019 mg/l (Survival) (*G. pseudolimnaeus*)

**Persistence and degradability**

Not available

**Bioaccumulative potential**

Not available

**Mobility in soil**

No data

**Results of PBT and vPvB assessment**

Not classified as PBT or vPvB.

**Other adverse effects**

None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

### Additional Information

None known.

## SECTION 14: TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

Not classified as dangerous for transport.

UN number

Proper Shipping Name

Transport hazard class(es)

Packing Group

Marine Pollutant

Special precautions for user

### Land transport (ADR/RID)

Not classified as dangerous for transport.

UN number

Proper Shipping Name

Transport hazard class(es)

Packing Group

Marine Pollutant

Special precautions for user

### Sea transport (IMDG)

Not classified as dangerous for transport.

UN number

Proper Shipping Name

Transport hazard class(es)

Packing Group

Environmental hazards

Special precautions for user

### Air transport (ICAO/IATA)

Not classified as dangerous for transport.

UN number

Proper Shipping Name

Transport hazard class(es)

Packing Group

Environmental hazards

Special precautions for user

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not established

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(P2AO60-HT300-LT200-AR465-AR456-PS207-DM220)

## SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories:

Fire  Sudden Release  Reactivity  Immediate (acute)  Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

Date of preparation: April 15, 2013

Additional Information: None.

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