SECTION 1. IDENTIFICATION

Identification of the company: Clariant Corporation
4000 Monroe Road
Charlotte, NC, 28205
Telephone No.: +1 704 331 7000

Information of the substance/preparation:
Product Safety 1-704-331-7710
Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: HOSTANOX P-EPQ P
Material number: 103416
CAS number: 119345-01-6
Primary product use: Antioxidant
Chemical family: Aryl Phosphonit

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Combustible dust:

GHS Label element
Signal word: Warning
Hazard statements: May form combustible dust concentrations in air
Precautionary statements: Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 Take precautionary measures against static discharge.
P233 Keep container tightly closed.

Other hazards
Does not require a hazard warning label, but the normal safety precautions for handling chemicals must be observed.
Dust can form an explosive mixture in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous trichloride, reaction products with 1,1'-biphenyl and 2,4-bis(1,1-</td>
<td>119345-01-6</td>
<td>&lt;= 100</td>
</tr>
<tr>
<td>dimethylethyl)phenol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice: Get medical advice/attention if you feel unwell.

If inhaled:
- Move the victim to fresh air.
- Give oxygen or artificial respiration if needed.
- Get immediate medical advice/attention.
- Never give anything by mouth to an unconscious person.

In case of skin contact:
- Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

In case of eye contact:
- Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.

If swallowed:
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed:
The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.

Notes to physician: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: all

Unsuitable extinguishing media: No restrictions

Specific hazards during firefighting:
- Carbon oxides
- Oxides of phosphorus
- None known.

Further information:
- Cool containers/tanks with water spray.
- Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

Special protective equipment for firefighters:
- Self-contained breathing apparatus
- Impervious clothing
- Protective helmets
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Wearing appropriate personal protective equipment, contain spill and collect into a suitable container. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

Environmental precautions: The product should not be allowed to enter drains, water courses or the soil.

Methods and materials for containment and cleaning up: Take up mechanically. Avoid dust formation. Take measures to prevent the build up of electrostatic charge. Risk of dust explosion. Treat recovered material as described in the section "Disposal considerations".

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Take precautionary measures against static discharges. Avoid dust formation. Keep away sources of ignition.

Advice on safe handling: Avoid dust formation. Keep away from sources of ignition. Lead off electrostatic charges. Avoid inhalation, ingestion and contact with skin and eyes. Wash thoroughly after handling.

Technical measures/Precautions: Store in original container. Keep container tightly closed. Store in a cool, dry, well-ventilated area.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures: Use adequate exhaust ventilation and/or dust collection to keep dust levels below exposure limits.

Personal protective equipment

Respiratory protection: Use NIOSH/MSHA approved respirators following manufacturer's recommendations where dust or fume may be generated.

Hand protection
Remarks : Nitrile rubber gloves.

Eye protection : Safety glasses or chemical splash goggles.

Skin and body protection : Wear suitable protective equipment.

Protective measures : Observe the usual precautions for handling chemicals.

Hygiene measures : This substance is classified as non-hazardous. However the usual precautions for handling chemicals must be observed to avoid contact with the skin, eyes and respiratory tract. In case of contact with the product, wash the eye immediately with running water and the skin with water and soap.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Colour : white to slightly yellow

Odour : not specified

Odour Threshold : not tested.

pH : Not applicable

Drop point : 100 - 110 °C
 GLP: yes

Melting point : 85 - 103 °C
 Method: OECD Test Guideline 102
 GLP: yes

Boiling point : > 280 °C (1,013 hPa)
 Decomposition: yes
 Method: OECD Test Guideline 103
 GLP: yes

Flash point : Not applicable

Evaporation rate : not tested.

Flammability (solid, gas) : The product is not flammable.
 Method: 92/69/EC (L383) A.10 * flammability (solids)
 GLP: yes

Upper explosion limit : not tested.

Lower explosion limit : not tested.

Vapour pressure : < 0.000001 Pa (approx. 20 °C)
Relative vapour density : not tested.

Density : 1.04 g/cm³ (20 °C, 1,013 hPa)
Method: OECD Test Guideline 109
GLP: yes

Solubility(ies):
Water solubility : < 1 mg/l below detection limit (20 °C)
Method: OECD Test Guideline 105
GLP: yes

Solubility in other solvents : not tested.
Solvent: fat

Partition coefficient: n-octanol/water : log Pow: > 6 (25 °C)
Method: OECD Test Guideline 117
GLP: yes

Auto-ignition temperature : not tested.

Decomposition temperature : > 500 °C
Method: OECD Test Guideline 113
No decomposition if used as directed.

Viscosity
Viscosity, dynamic : 3,270 mPa.s (130 °C)
386 mPa.s (150 °C)

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.
Method: Directive 84/449/EEC, A.17
GLP: no

Method: Expert judgement
The product does not contain organic peroxide-groups which result from either the manufacturing process or from added ingredients.

SECTION 10. STABILITY AND REACTIVITY
Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable

Possibility of hazardous reactions: Stable
Reactions with strong alkalies and oxidising agents.
The product is not a dust explosion risk as supplied; however the build-up of fine dust can lead to a risk of dust explosions. The substance or mixture does not emit flammable gases in contact with water.
Not corrosive to metals

Conditions to avoid: None known.

Incompatible materials: no data available

Hazardous decomposition products: Carbon oxides
Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Eye contact
Skin contact
Inhalation

Acute toxicity
Product:
Acute oral toxicity: LD50 (Rats (Male/Female)): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute inhalation toxicity: Remarks: not tested.

Acute dermal toxicity: LD50 (Rats (Male/Female)): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Product:
Species: Rabbit
Exposure time: 4 h
Assessment: non-irritant
Result: No skin irritation
GLP: yes
Serious eye damage/eye irritation

Product:
Species: Rabbit
Result: No eye irritation
Assessment: non-irritant
Method: OECD Test Guideline 405
GLP: yes

Respiratory or skin sensitisation

Product:
Test Type: Guinea pig maximization test
Species: Guinea pig
Assessment: non-sensitizing
Method: OECD Test Guideline 406
Result: non-sensitizing
GLP: yes

Germ cell mutagenicity

Product:
Germ cell mutagenicity - Assessment: In vitro tests did not show mutagenic effects

Carcinogenicity

Product:
Carcinogenicity - Assessment: No information available.

IARC Not listed
OSHA Not listed
NTP Not listed

Reproductive toxicity

Product:
Reproductive toxicity - Assessment: No information available.

STOT - single exposure

Product:
Remarks: no data available

STOT - repeated exposure

Product:
Remarks: no data available
### Aspiration toxicity

**Product:**
no data available

### Experience with human exposure

**Product:**
General Information : The possible symptoms known are those derived from the labelling (see section 2).

### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

**Product:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 (Oncorhynchus mykiss (rainbow trout)): &gt; 1,000 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>96 h</td>
</tr>
<tr>
<td>Test Type</td>
<td>static test</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 203</td>
</tr>
<tr>
<td>GLP</td>
<td>yes</td>
</tr>
<tr>
<td>Remarks</td>
<td>No observable toxic effect in saturated solution.</td>
</tr>
</tbody>
</table>

NOEC (Oncorhynchus mykiss (rainbow trout)): >= 1.2 mg/l
Exposure time: 21 d
Test Type: flow through
Method: OECD Test Guideline 204
GLP: yes
Remarks: No observable toxic effect in saturated solution.

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
<th>EC50 (Daphnia magna (Water flea)): &gt; 1,000 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>48 h</td>
</tr>
<tr>
<td>Test Type</td>
<td>OECD Test Guideline 202</td>
</tr>
<tr>
<td>Method</td>
<td>yes</td>
</tr>
<tr>
<td>Remarks</td>
<td>No observable toxic effect in saturated solution.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to algae</th>
<th>NOEC (Green algae - fresh water (Pseudokirchneriella subcapitata)): &gt;= 100 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>End point</td>
<td>Growth rate</td>
</tr>
<tr>
<td>Exposure time</td>
<td>72 h</td>
</tr>
<tr>
<td>Test Type</td>
<td>OECD Test Guideline 201</td>
</tr>
<tr>
<td>GLP</td>
<td>yes</td>
</tr>
<tr>
<td>Remarks</td>
<td>No observable toxic effect in saturated solution.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</th>
<th>NOEC (Daphnia magna (Water flea)): &gt; 0.307 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>21 d</td>
</tr>
<tr>
<td>End point</td>
<td>Reproduction rate</td>
</tr>
<tr>
<td>Test Type</td>
<td>semi-static test</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 211</td>
</tr>
<tr>
<td>GLP</td>
<td>yes</td>
</tr>
<tr>
<td>Remarks</td>
<td>No toxicity at the limit of solubility</td>
</tr>
</tbody>
</table>
Toxicity to bacteria:
EC50 (activated sludge): > 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP: yes
Remarks: No observable toxic effect in saturated solution.

Toxicity to soil dwelling organisms:
Test Type: artificial soil
NOEC (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
GLP: yes

Plant toxicity:
EC50 (Avena sativa (oats)): > 100 mg/kg
End point: Growth
Method: OECD Guide-line 208
GLP: yes
EC50 (Brassica rapa): > 100 mg/kg
End point: Growth
Method: OECD Guide-line 208
GLP: yes
EC50 (Lepidium sativum (cress)): > 100 mg/kg
End point: Growth
Method: OECD Guide-line 208
GLP: yes

Persistence and degradability

Product:
Biodegradability:
Inoculum: activated sludge
Result: Not biodegradable
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Inoculum: activated sludge, domestic
BOD/CODX100
Result: Not readily biodegradable.
Biodegradation: 24.5 % (BOD/CODX100)
Exposure time: 28 d
Method: OECD 302C * 1981 Mod. MITI (II) (inherent)
GLP: yes

Bioaccumulative potential

Product:
Bioaccumulation:
Remarks: not available
Mobility in soil
no data available

Other adverse effects

Product:
Environmental fate and pathways : Remarks: no data available
Additional ecological information : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues : Small quantities may be treated in aerobic wastewater treatment systems. Larger quantities may be incinerated or landfilled after solidification in permitted systems.
Contaminated packaging : Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

DOT not restricted
IATA not restricted
IMDG not restricted

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 : This product does not contain any toxic chemical listed under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

Clean Water Act
Contains no known priority pollutants at concentrations greater than 0.1%.

The components of this product are reported in the following inventories:
TSCA : On TSCA Inventory

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

On the basis of an extensive test program, which had to be submitted to the competent authority on the occasion of the Notification of the substance in the European Community, this product was found to be toxicologically not dangerous within the meaning of the EC Directives.
Handle with care. Organic dusts have the potential to be explosive with static spark or flame initiation.

Revision Date : 04/13/2015

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.

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