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: EXOLIT OP 930
Material number: 134596
Primary product use: Flame retardants
Chemical family: Organophosphorus salt

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
None known.

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>Organophosphorous salt</td>
<td>Not Assigned</td>
<td>100</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice: Remove contaminated clothing and shoes.
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
: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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
: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
: gaseous extinguishing media

Specific hazards during firefighting
: In case of fires, hazardous combustion gases are formed:
  Carbon monoxide (CO)
  Carbon dioxide (CO2)
  Phosphorus oxides (eg Phosphorus pentoxide)

  Electrical grounding of equipment is required to prevent possible dust explosion. Emits toxic fumes under fire conditions.

Further information
: 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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and
: Do not breathe dust.
  Avoid contact with skin and eyes.
emergency procedures
Wear personal protective equipment. Unprotected persons must be kept away.
Wearing appropriate personal protective equipment, contain spill, collect onto inert absorbent, and place in a suitable container.
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

Environmental precautions
Do not let product enter drains.
Retain and dispose of contaminated wash water.

Methods and materials for containment and cleaning up
Pick up mechanically. Rinse away rest with water.
Avoid dust formation.

SECTION 7. HANDLING AND STORAGE
Advice on protection against fire and explosion
Dust can form an explosive mixture in air. Keep away sources of ignition. Avoid dust formation. Avoid dust accumulation in enclosed space. In areas with dust explosion hazard: maximum surface temperature of 310 °C (according DIN EN 50281-2-1).

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.

Materials to avoid
Observe TRGS 514Ü (storage compatibility)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters
No level has been established by OSHA, NIOSH, ACGIH.

Engineering measures
Local ventilation recommended - mechanical ventilation may be used.

Personal protective equipment
Respiratory protection
Particle filter half mask, filter P1

Hand protection
Remarks
Butyl Rubber, PVC Or Neoprene.

Eye protection
Safety glasses or chemical splash goggles.
Skin and body protection: Wear suitable protective equipment.

Protective measures: Do not breathe dust.
Avoid contact with skin.
Avoid contact with eyes.

Hygiene measures: When using do not eat or drink.
When using do not smoke.
Clean skin thoroughly after work; apply skin cream.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: powder
Colour: white
Odour: odourless
Odour Threshold: no data available
pH: approx. 5, Concentration: 10 g/l (20 °C) Suspension in water

Decomposition temperature: from 300 °C
Method: DTA

Initial boiling point and boiling range: Not applicable Decomposes below the boiling point.

Flash point: Not applicable
Evaporation rate: no data available
Upper explosion limit: no data available
Lower explosion limit: no data available
Vapour pressure: Not applicable
Relative vapour density: no data available
Relative density: no data available
Density: 1.35 g/cm³ (23 °C)

Bulk density: 100 - 250 kg/m³ (20 °C)

Solubility(ies):
Water solubility: < 2 g/l (20 °C)
Partition coefficient: n-octanol/water : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : > 300 °C
Decomposes before melting.
Viscosity
  Viscosity, dynamic : Not applicable
  Viscosity, kinematic : Not applicable
Impact sensitivity : Not impact sensitive.
Molecular weight : no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable
Possibility of hazardous reactions : Dust can form an explosive mixture in air.
  Stable
Conditions to avoid : Temperatures exceeding thermal stability. High concentration
  of powders. Electrostatic charges.
  Temperatures > 280 °C when incorporating into polybutylene terephthalate (PBT) and PBT-containing polymers.
Incompatible materials : none
Hazardous decomposition products : Phosphorus oxides (eg Phosphorus pentoxide)

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Eye contact
Skin contact
Inhalation
  Acute toxicity
  Product:
  Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
    Method: OECD Test Guideline 401
  Acute inhalation toxicity : Remarks: no data available
Acute dermal toxicity : LD50 (rat (female)): > 2,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation
Product:
Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

Serious eye damage/eye irritation
Product:
Species: rabbit eye
Result: slight irritant effect - does not require labelling
Method: OECD Test Guideline 405

Respiratory or skin sensitisation
Product:
Species: Guinea pig
Method: OECD Test Guideline 406
Result: non-sensitizing
GLP: yes

Germ cell mutagenicity
Product:
Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Species: Chinese hamster cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : Not mutagenic in Ames Test

No information available.

Carcinogenicity
Product:
Carcinogenicity -
Assessment: No information available.

IARC: Not listed
OSHA: Not listed
NTP: Not listed

Reproductive toxicity
Product:
Reproductive toxicity -
Assessment: No reproductive toxicity to be expected.

STOT - single exposure
Product:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure
Product:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity
Product:
Species: Rats (Male/Female), male and female
NOAEL: > 1,000 mg/kg
Application Route: oral (gavage)
Exposure time: 29
Number of exposures: 28
Method: OECD Test Guideline 407
GLP: yes

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:

Toxicity to fish:
- LC50 (Danio rerio (zebra fish)): > 100 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 203
- NOEC (Danio rerio (zebra fish)): 100 mg/l
  - Exposure time: 28 d
  - Test Type: semi-static test
  - Method: OECD Test Guideline 215
  - GLP: yes
- LOEC (Danio rerio (zebra fish)): > 100 mg/l
  - Exposure time: 28 d
  - Test Type: semi-static test
  - Method: OECD Test Guideline 215
  - GLP: yes

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): > 100 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

Toxicity to algae:
- NOEC (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 180 mg/l
  - Analytical monitoring: yes
  - Method: Tested according to Directive 92/69/EEC.
  - GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOEC (Daphnia magna (Water flea)): approx. 10 mg/l
  - Test Type: semi-static test
  - Method: OECD Test Guideline 211
  - GLP: yes
- LOEC (Daphnia magna (Water flea)): ca. 32 mg/l
  - Test Type: semi-static test
  - Method: OECD Test Guideline 211
  - GLP: yes

Toxicity to bacteria:
- EC50 (activated sludge): = 1,968 mg/l
  - Exposure time: 3 h
  - Method: OECD Test Guideline 209
  - GLP:

Toxicity to soil dwelling organisms:
- Remarks: not available

Plant toxicity:
- Remarks: The study is not necessary from a scientific perspective.

Toxicity to terrestrial:
- Remarks: not available
organisms

**Persistence and degradability**

**Product:**
- Biodegradability: Test Type: anaerobic Degradability
  - Result: Not biodegradable
  - Method: OECD Test Guideline 302B
  - GLP: no
  - Remarks: Data refer to the organic component.

**Bioaccumulative potential**

**Product:**
- Bioaccumulation: Remarks: not available

**Mobility in soil**

**Product:**
- Distribution among environmental compartments: adsorption
  - Koc: 0.38, log Koc: -0.42
  - Method: OECD Test Guideline 121
  - Remarks: Based upon the calculated log Koc, adsorption to the soil phase is not expected.

**Other adverse effects**

**Product:**
- Results of PBT and vPvB assessment: This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Additional ecological information:** The product should not be allowed to enter drains, water courses or the soil.

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**
- Waste from residues: Dispose of spilled or waste product, contaminated soil and other contaminated materials in licensed landfill or treatment facility in accordance with all local, state, and federal regulations.
- Contaminated packaging: Packaging that cannot be cleaned should be disposed of as product waste

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**SECTION 14. TRANSPORT INFORMATION**
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

Not on the Chemical Weapons Convention (CWC) Toxic Chemicals and Precursors List
Handle with care. Organic dusts have the potential to be explosive with static spark or flame initiation.

Revision Date : 04/28/2015
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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