SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Plastics & Coatings (Deutschland) GmbH Frankfurt am Main, 65926 Telephone No.: +49 69 305 18000 **Information of the substance/preparation:** Product Stewardship, +1-704-331-7710 **Emergency tel. number:** +1 800-424-9300 CHEMTREC

Trade name: **Hostanox P-EPQ P**

CAS number: 119345-01-6

Primary product use: Antioxidant

Chemical family: Aryl Phosphonite

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Combustible dust

GHS label elements

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

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Substance name : Aryl Phosphonite

CAS-No. : 119345-01-6

Hazardous components

This product does not contain any components that require disclosure according to OSHA Hazard Communication Standard 2012.

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/doctor.
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	:	Foam Water spray jet Dry powder
Unsuitable extinguishing media	:	High volume water jet Carbon dioxide (CO2)
Specific hazards during firefighting	:	Carbon oxides Oxides of phosphorus
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	:	Impervious clothing Protective helmets

Self-contained breathing apparatus

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

Contains no substances with occupational exposure limit values.

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 : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and immediately after handling the product.
Avoid contact with the skin and the eyes.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Colour : yellow

Odour : not specified

Odour Threshold : cannot be determined

pH : approx. 8 (20 °C)
Concentration: < 1 mg/l
Method: OECD Test Guideline 105
GLP: yes
saturated aqueous solution

Drop point : 100 - 110 °C
Method: 92/69/EEC, A.1.
GLP: yes

Melting range 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
Decomposes below the boiling point.

Flash point : Not applicable

Evaporation rate : Non-Volatile

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

GLP: yes

Self-ignition	:	> 400 °C Method: Directive 67/548/EEC, Annex V, A.16 GLP: yes The substance or mixture is not classified as self heating. Method: Expert judgement The substance or mixture is not classified as pyrophoric.
Burning number	:	2 (20 - 100 °C) Method: Combustibility test safety laboratory GLP: no Short flaring up without spreading
Upper explosion limit / upper flammability limit	:	not tested.
Lower explosion limit / Lower flammability limit	:	not tested.
Vapour pressure	:	< 0.000001 Pa (approx. 25 °C) Method: OECD Test Guideline 104 GLP: no
Relative vapour density	:	Not applicable
Relative density	:	1.04 (20 °C, 1,013 hPa) Method: OECD Test Guideline 109 GLP: yes
Density	:	1.04 g/cm3 (20 °C) Method: OECD Test Guideline 109 GLP: yes
Bulk density	:	530 kg/m3 (20 °C)
Solubility(ies)		
Water solubility	:	< 1 mg/l (20 °C, approx. 1,013 hPa) pH: 8 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 applicable
Decomposition temperature	:	> 500 °C

Heating rate: 3 K/min
Method: OECD Test Guideline 113

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

386 mPa.s (150 °C)

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive
Not explosive
Method: Directive 84/449/EEC, A.14
GLP: no

Not explosive
Method: 92/69/EC (L383) A.14 * Explosive properties
GLP: yes

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Reference substance: Potassium bromate/Cellulose
Method: Directive 84/449/EEC, A.17
GLP: yes

Self-heating substances : Not applicable

Impact sensitivity : Not impact sensitive.
Method: 92/69/EC (L383) A.14 * Explosive properties

Sublimation point : Not applicable

Dust deflagration index (Kst) : 248 m.b_/s
Method: VDI 2263
GLP: no data available

Dust explosion class : ST2 Capable of dust explosion

Minimum ignition energy : 13 - 30 mJ
Method: Mike 3 apparatus
with inductive electrical resistance

Particle size : approximately 35 µm
Method: Laser diffraction with dispersion in dry air.
Median value

SECTION 10. STABILITY AND REACTIVITY

Reactivity : See section 10.3. "Possibility of hazardous reactions"

Chemical stability : Stable

Possibility of hazardous reactions	:	Stable Reactions with strong alkalies and oxidising agents. The substance or mixture does not emit flammable gases in contact with water. Not corrosive to metals Risk of dust explosion.
Conditions to avoid	:	Strong oxidizing agents Strong bases
Incompatible materials	:	See under section "Conditions to avoid"
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 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 423 GLP: yes
Acute inhalation toxicity	:	Remarks: not tested.
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes

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
Result: No eye irritation
Exposure time: 72 h
Method: OECD Test Guideline 405

GLP: yes

Respiratory or skin sensitisation

Product:

Test Type: Maximisation Test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
GLP: yes

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells Concentration: 3,1 - 100 µg/ml Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: yes Test Type: Ames test Test system: Salmonella typhimurium Concentration: 33 - 5000 µg/plate Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Cell type: Erythrocytes Application Route: oral (gavage) Exposure time: 24 h Dose: 2500 - 5000 - 10000 mg/kg Method: Other Result: negative GLP: no
Germ cell mutagenicity - Assessment	:	In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Carcinogenicity

Product:

Carcinogenicity - Assessment	:	No evidence of carcinogenicity in animal studies.

IARC	Not listed
OSHA	Not listed

NTP Not listed

Reproductive toxicity

Product:

Effects on fertility : Test Type: One generation study
Species: Rat, male and female
Application Route: oral (feed)
Dose: 50 - 150 - 300 mg/kg
General Toxicity - Parent: NOAEL: 150 mg/kg body weight
General Toxicity F1: NOAEL: 150 mg/kg body weight
Method: Other
GLP: no

Effects on foetal development : Species: Rat, male and female
Strain: wistar
Application Route: Oral
Dose: 100 mg/kg Futter
Duration of Single Treatment: 730 d
Method: Other
GLP: no
Remarks: Based on available data, the classification criteria are not met.

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Product:

Remarks: not available

STOT - repeated exposure

Product:

Remarks: not available

Repeated dose toxicity

Product:

Species: Dog, male and female
NOAEL: 150 mg/kg
Application Route: oral (gavage)
Exposure time: 93 - 97 d
Number of exposures: daily
Dose: 30 - 150 - 500 mg/kg
Group: yes
Method: OECD Test Guideline 409
GLP: yes

Aspiration toxicity

Product:

No aspiration toxicity classification

Experience with human exposure

Product:

General Information : When used as intended, no effects to health are expected.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 18.65 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes
Remarks: No toxicity at the limit of solubility

NOEC (Oncorhynchus mykiss (rainbow trout)): >= 1.2 mg/l
Exposure time: 21 d
Test Type: flow-through test
Method: OECD Test Guideline 204
GLP: yes
Remarks: No toxicity at the limit of solubility

LOEC (Oncorhynchus mykiss (rainbow trout)): > 1.2 mg/l
Exposure time: 21 d
Test Type: flow-through test
Method: OECD Test Guideline 204
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 12.7 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): >= 78.6 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: No toxicity at the limit of solubility

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 78.6 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): >= 1.2 mg/l
End point: mortality
Exposure time: 21 d
Test Type: flow-through test
Analytical monitoring: no data available
Method: OECD Test Guideline 204
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 0.307 mg/l
End point: mortality
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

NOEC (Daphnia magna (Water flea)): > 0.307 mg/l
End point: Reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

Toxicity to microorganisms : IC50 (activated sludge): > 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes
Remarks: No toxicity at the limit of solubility

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

Plant toxicity : EC50 (Avena sativa (oats)): > 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

NOEC (Avena sativa (oats)): >= 100 mg/kg

Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

LOEC (Avena sativa (oats)): > 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

EC50 (Brassica rapa): > 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

NOEC (Brassica rapa): >= 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

LOEC (Brassica rapa): > 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

EC50 (Lepidium sativum (cress)): > 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

NOEC (Lepidium sativum (cress)): >= 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

LOEC (Lepidium sativum (cress)): > 100 mg/kg
Exposure time: 21 d
End point: Growth
Method: OECD Guide-line 208
GLP: yes

Persistence and degradability

Product:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 30 mg/l

Result: Not readily biodegradable.
Biodegradation: 24.5 % (Biochemical Oxygen Demand (BOD))
Exposure time: 28 d
Method: OECD Test Guideline 302C
GLP: yes

Test Type: aerobic
Inoculum: activated sludge, domestic
Concentration: 100 mg/l
Result: Not biodegradable
Biodegradation: 0 % (Biochemical Oxygen Demand (BOD))
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Physico-chemical removability : Remarks: Not readily biodegradable.
The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

Stability in water : Test Type: abiotic
Method: OECD Test Guideline 111
GLP: yes
Remarks: Not applicable

Bioaccumulative potential

Product:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 103
Exposure time: 42 d
Temperature: 24.7 °C
Concentration: 0.79 mg/l
Elimination: no data available
Method: Other
GLP: yes
Remarks: The bioaccumulation potential of the main component of the mixture is expected to be low.

Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 112
Exposure time: 42 d
Temperature: 24.7 °C
Concentration: 0.05 mg/l
Elimination: no data available
Method: Other
GLP: yes
Remarks: The bioaccumulation potential of the main component of the mixture is expected to be low.

Mobility in soil

no data available

Other adverse effects

Product:

Environmental fate and pathways	:	Remarks: The product has not been tested. Because of the product's consistency and low solubility in water bioavailability is not likely.
Additional ecological information	:	The product should not be allowed to enter drains, water courses or the soil.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	This product, if discarded as sold, is not a Federal RCRA hazardous waste.
Waste Code	:	NONE
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 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Combustible dust

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

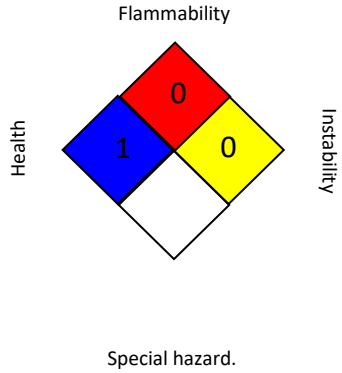
The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory, All components are compliant with the TSCA Inventory Notification (Active) rule.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of

Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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 : 10/04/2018

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express or implied, as to the information’s accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. NO EXPRESS OR IMPLIED WARRANTY IS MADE OF THE MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY PRODUCT OR SERVICE. Nothing included in this information waives any of Clariant’s General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.

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