

▽SDS REACH and CLP GHS regulations EC N°1907/2006 - 1272/2008

1. IDENTIFICATION OF THE MATERIAL AND OF THE COMPANY

Trade name / Substance Name: NOVINOX PAT30

REACH Registration number: 01-2119490076-36-0003

Type of use : anticorrosive pigment (solid corrosive inhibitor) for paints. (See section 16)

Manufacturer : SOCIETE NOUVELLE DES COULEURS ZINCIQUES

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24-hour international emergency number : INT + 1 703 527 3887 (CHEMTREC - USA).

2. HAZARD IDENTIFICATION

Product description: This product is an alkaline earth phosphate which may have an impurity: zinc phosphate (0-5%)

Danger: none for humans and the environment.

▽**Labelling according CLP regulation 1272/2008/CE:** none. Substance not classified. Safety data sheet available on request.

▽**Classification system:** This substance may contain 5% zinc phosphate as impurity. Due to the manufacturing process, traces of zinc phosphate may be included in the product. Zinc phosphate is known as a very dangerous substance to aquatic organisms. Due to appropriate tests results this "mixture" is not classified (see chapter 12). The classification of this mixture/ preparation as a whole entity "NOVINOX PAT30" provided by SNCZ is based on relevant information obtained on the product itself "NOVINOX PAT30". Appropriate tests were conducted in accordance with:

- Article 6.1.1a) of Regulation 1272/2008/EC
- GHS 2009 chapter 1.3.2.3 a) and part 4.1: Hazardous to the aquatic environment

▽Other specific information to substance derived from EC classification of substances (see chapter 3): This substance/mixture does not meet the PBT vPvB criteria of REACH regulation, annex XIII

3. COMPOSITION/DATA ON COMPONENTS

Chemical composition : Alkaline earth phosphate 95%-100%, mono-constituent substance .
REACH Registration number : 01-2119490076-36-0003

Hazardous components/impurities :

Impurity

N°CAS	Annex VI Index N°	EINECS N°	Name	%	Phrases	Symbol
7779-90-0	030-011-00-6	231-944-3	Zn ₃ (PO ₄) ₂ , xH ₂ O Zinc phosphate	0-5	H400 H410	GHS09

∇**Environmental Risk H410**: Zinc phosphate substance is, Very toxic to aquatic life, with long lasting effects: may cause long-term adverse effects in the aquatic environment.

4. FIRST AID AND MEASURES

Description of first aid measures : Get immediately medical attention.

Specific measure: No specific requirements.

After inhalation: Remove from exposure area to fresh air. Seek medical attention. If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing.

After skin contact: Wash with mild soap and water until no evidence of product remains. Thoroughly clean and dry contaminated clothing and shoes before reuse.

After eyes contact: Immediately flush eyes with water for at least 15 min, until no evidence of chemical remains. Seek medical attention if necessary.

After ingestion: Rinse mouth with water. If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Immediately get medical attention. Treat symptomatically and supportively. This product may induce intestinal troubles.

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5. FIRE FIGHTING MEASURES

Suitable extinguishing means : No restriction for neighbouring fire.

Specific hazards arising from the substance: Not flammable substance, Do not let this substance and its solutions contaminate the environment.

5. FIRE FIGHTING MEASURES (continued)

Advise for firefighters

Special personal protection equipment : Wear an appropriate air respirator and an appropriate equipment.

Conduct of firefighting : No specific requirement (not flammable fire retardant). Avoid creating dust under nuisance dust permitted limits. In case of fire, residues may contaminate the environment and have to be collected and stocked in special containers. Contaminated wastes have to be collected by a licensed contractor. Dike and contain, fire-control water, for later disposal. Do not let contaminated water contaminate the environment.

Additional information : Contaminated residues must be disposed of according to local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal protective measures: If dusting (upper permitted limits) mask with a high-efficiency particulate filter and with a full face-piece. Avoid disperse and walk through spilled on the ground.

Environmental protection conduct: Do not sweep or wash in public stretches of water or unknown discharge NOVINOX PAT30, in respect with local regulations. To prevent dispersion on the floor and later in the environment, it is highly recommended to forbid walking on the product spillage. Do not discharge contaminated water in public sewage.

Methods and material for containment and cleaning up

Spill and leak procedure: Avoid/minimise residues and waste production according to local regulations. Use wet clean up technique to avoid dusting. Keep covered material in watertight and closed containers. Suck up avoiding dust (vacuum or wet device). Eliminate residues according to local regulations (dangerous waste).

Soil: Remove containers from spill area. In large spills, rescue must be in the same direction as the wind and prohibit the formation of dust clouds. Collect spills on the floor; eliminate waste according with national regulations.

Water: Not contaminate the environment. Seal the manhole sewer, prohibit access to water contaminated with this product in water systems and contain the water in area water resistant to removal by an authorized company

7. HANDLING AND STORAGE

Precautions for safe handling:

EC:

Handling : Avoid breathing dust and walk in the fallout on the ground. Keep away from food stuff. Use adequate exhaust ventilation to maintain nuisance dust below permitted limits. Prohibit any discharge into water systems and emission in the environment.

Protection against fire and explosion : The product is non-flammable .Must guard against electrostatic discharge in hazardous/explosive area.

7. HANDLING AND STORAGE (continued)

Conditions for safe storage, including any incompatibilities:

Storage conditions : store under clean, dry conditions at room temperature. Keep containers tightly sealed.

Material/Chemical incompatibility : none. However, it is recommended to store this material away from acids alkali and ammonia (solubility in these solvents).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROFESSIONAL EXPOSURE CONTROL

EXPOSURE LIMIT VALUE (Occupational Exposure Limits) :

Engineering controls : no specific exposure limits established for substance (OSHA, ACGIH, NIOSH). Cf §7.

Parameters of exposure controls : (VME 8 hours = TWA, TLV= limit valour)

<u>Designation</u> <u>Substance</u>	<u>Type of Data</u>	<u>Unit</u>
Total dust	OSHA PEL	15 mg/m ³ TWA
	ACGIH TLV	10 mg/m ³ (inhalation) TWA
Breathable dust	OSHA PEL	5 mg/m ³ TWA
	ACGIH TLV	3 mg/m ³ (breathable) TWA

Parameters of exposure controls : Total dust of Zinc Phosphate (Impurity)

<u>Impurity</u> <u>Designation</u>	<u>Type of Data</u>	<u>Unit</u>
Total dust (no special effect)	ACGIH-91/93	
	TLV : TWA (USA)	10 mg/m ³
	MAK (Germany)	6 mg/m ³ Valid as per (mm/yy) : 05 / 95
	VME France 8H	10 mg/m ³
	VME France 8H	5 mg/m ³ respirable dust

OCCUPATIONAL EXPOSURE MANAGEMENT:

The DNELs for inhalation derived for NOVINOX PAT30 under REACH for both groups are: (Inhalable fraction)

- DNEL_{long term} (worker) = 4.07 mg/m³;
- DNEL_{long term} (general population) = 3.04 mg/m³;

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory protection : adapted dust mask while handling the powder (for example FFP2). If possible, use a full face piece mask (upper permitted limits) when dust occurs.

Hand protection : use gloves during handling.

Eye protection : safety glasses with side shields (for example EN166).

Skin protection : Wear appropriate clothing to avoid any contact with skin.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent from any possibility of skin contact with this substance,

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Other protective equipment/recommendations : observe good personal hygiene. Keep away from food stuff, drinks on the site. Wear appropriate working clothing.

ENVIRONMENT PROTECTIVE MEASURES

Atmospheric emissions: ventilation systems must be appropriate for the level of performance required to control air emissions in accordance with current national requirements.

Water emissions: must be controlled to prevent contamination of public sewage, rivers, surface water according national and local regulations.

Soil emissions: Do not let this material to contaminate soils or ground.

PNECs for NOVINOX PAT30

Environmental compartment	PNEC value
Freshwater	Not available
Saltwater	Not available
Freshwater sediment	Not available
Saltwater sediment	Not available
Soil	Not available
STP	50 mg/L

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : solid, fine powder.

Appearance : white powder.

Odour : odourless.

Molecular weight : 174.3 g/mol.

Change in physical state

Dehydration

100 – 300°C

Melting

> 900°C

Decomposition

around 600°C (oxides restituti on)

Flash point

: not applicable.

Boiling point

: not applicable.

Flammable properties

: not combustible, fire retardant.

Explosion risk

: not applicable.

Vapour pressure (20°C)

: not applicable.

Specific gravity

: 2.1 g/cm³ ISO 787/10

Solubility (water 20°C)

: 0.5 g/l.

Solubility in acids alkali ammonia, insoluble in alcohols.

pH (20°C)

: 7 - 9

ISO 787/9

9. PHYSICAL AND CHEMICAL PROPERTIES (continued)

Other information

VOC content	: Not applicable: solid mineral
<input type="checkbox"/> Fat solubility	: Insoluble in oils/fats
<input type="checkbox"/> Bulk density	: $\approx 0.6 \text{ g/cm}^3$ (apparent), $\approx 0.9 \text{ g/cm}^3$ (tapped)
<input type="checkbox"/> Refractive index	: ≈ 1.5
<input type="checkbox"/> Nanoparticles concentration	: 0%, $dn0 > 0.5 \mu\text{m}$ $1 \mu\text{m} < dn50 < 2 \mu\text{m}$
<input type="checkbox"/> Additional information	: Take precautionary measures to prevent the formation of static electricity
<u>Partition coefficient: n-octanol-water</u>	: not applicable

10. STABILITY AND REACTIVITY

Reactivity: Unreactive with respect to materials commonly used in transport, handling and storage of industrial materials

Chemical stability: Stable under normal temperature and pressure.

Possibility of hazardous reactions: None hazardous reactions if stored and handled in controlled conditions.

Conditions to avoid: Keep clear of acids and bases (solubility in these media).

Incompatible materials: No further relevant information available.

Hazardous decomposition products: no hazardous decomposition product in normal storage conditions. This product doesn't polymerise.

11. TOXICOLOGICAL PROPERTIES

The substance is not classified. It is therefore not included in Annex VI to regulation GHS/CLP 1272/2008/EC

Toxicity:

LD ₅₀ oral (RAT) :	>2000mg/kg
LD ₅₀ oral:	>2000mg/kg bw (body weight)
LD ₅₀ dermal:	>2000mg/kg bw (body weight)
LD ₅₀ inhalation:	>2600mg/kg bw (body weight)

Additional information: With a LD₅₀ value equal to 2000 mg/kg "body weight", shows a low level of acute toxicity, not leading to classification for acute oral toxicity.

NOAEL values:

NOAEL (RAT) :	>410 mg/kg bw (body weight)
NOAEL (RABBIT) :	>217 mg/kg bw
NOAEL (MOUSE) :	>465 mg/kg bw

Potential health effects:

INHALATION:

<u>Short term exposure</u>	: No information on significant adverse effects
<u>Long term exposure</u>	: No information is available
<u>Acute exposure</u>	: No data available. May cause irritation to the mucous membranes.
<u>Chronic exposure</u>	: No data available.

SKIN CONTACT:

<u>Short term exposure</u>	: Mechanical irritation
<u>Long term exposure</u>	: Same as effects reported in short term exposure
<u>Acute exposure</u>	: No data available. May cause mechanical irritation. Particles may contaminate open wounds forming lesions that resist healing.
<u>Chronic exposure</u>	: No data available. Prolonged exposure may cause dermatitis.

EYE CONTACT:

<u>Short term exposure</u>	: No information is available
<u>Long term exposure</u>	: No information on significant adverse effects
<u>Acute exposure</u>	: No data available. Irritation may occur when eyes are exposed to dusts.
<u>Chronic exposure</u>	: Repeated or prolonged contact may cause conjunctivitis.

INGESTION:

<u>Short term exposure</u>	: Symptoms of drunkenness
<u>Long term exposure</u>	: No information is available
<u>Acute exposure</u>	: No data available.
<u>Chronic exposure</u>	: No data available.

<u>Carcinogenicity</u>	: Human, not classified.	Classification: OSHA: No	NTP: No	IARC: No.
<u>Teratogenicity</u>	: Human, not classified.			
<u>Mutagenicity</u>	: Human, not classified.			
<u>Irritating effect</u>	: Human, not classified.			

11. TOXICOLOGICAL PROPERTIES

TOXICITY SPECIFIC TARGET ORGAN:

- STOT (single exposure): Not classified
- STOT (repeated exposure): Not classified

12. ECOLOGICAL INFORMATION

∇ **Ecotoxicity** : The aquatic toxicity of this material, including zinc phosphate as an impurity, was determined, according to Good Laboratory Practices (GLP) protocols and OCDE guidelines. The study sponsored by SNCZ concluded that the zinc phosphate impurity included in this mixture/preparation is neither acute nor chronic aquatic toxic.

Acute toxicity for fish (<i>Oncorhynchus mykiss</i>)	LC50 (96 h)	> 100 mg/L
Acute toxicity for crustacea (<i>Daphnia magna</i>)	EC50 (48 h)	> 100 mg/L
Acute toxicity for algae (<i>Pseudokirchneriella subcapitata</i>)	EC50 (72 h)	> 100 mg/L
Reproduction Test (<i>Daphnia magna</i>) chronic toxicity OECD 211	NOEC 21 days	> 1 mg/L

∇ According to CLP regulation 1272/2008/EC this mixture does not meet with aquatic classification and labelling criteria (regulation 1272/2008/EC Article 6 1, data generated in accordance with any of the methods referred to, in Article 8(3), on the mixture itself "NOVINOX PAT 30", and GHS 2009 chapter 1.3.2.3 a).

Mobility : Do not mix with waste waters.

Persistence/degradability : Not bio-degradable.

Results of PBT and vPvB assessment (annex XIII of regulation 1907/2006/EC): Not applicable because the substance is an inorganic substance.

Others lasting effects: No further relevant information available

This product is not hazardous for the environment when used properly.

13. DISPOSAL

Methods of waste treatment:

Material: dispose in accordance with local environmental regulations

* this preparation does not meet the definition of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Contaminated package and containers: empty bags can be either destroyed, or recycled according to the international norms that apply.

14. TRANSPORT INFORMATION

Product not classified or regulated (chapter 12)

ADR: Not regulated. **IMDG:** Not regulated. **IATA:** Not regulated.

15. REGULATORY INFORMATION

This substance is not subject to labelling according GHS/CLP regulation 1272/2008/EC.

▽ **Symbol of danger according to the EU regulation 1272/2008:** None for NOVINOX PAT30

However, this material may contain 0-5% of zinc phosphate.

Zinc phosphate is labelled as following:

▽ **Symbol of danger :** GHS09, Dangerous for the environment.
H410 Very toxic to aquatic life, with long lasting effects.

Due to its non-hazardous nature, NOVINOX PAT30 is not subject to any storage restriction. This material is not SEVESO II regulated (EC).

Chemical safety assessment: Chemical safety report was performed for NOVINOX PAT 30 (see chapter 16). As this substance is not dangerous, NOVINOX PAT30 does not need the requirement of risk management measures.

16. FURTHER INFORMATION

- **TOTAL LEAD** : < 0,1 %
- **SOLUBLE LEAD (HCI 0, 07 N)** : < 0,1 %

EC:

Preparation/mixture labelling: This product is not subjected to labelling and classification.

Storage: Due to non-classification NOVINOX PAT 30 is not subjected to any storage restriction rule.

GERMANY: - **Wassergefährdungsklasse WGK (VwVwS):** WGK 1 –in accordance with annex 4, German VwVwS.

USA:

NFPA Classification (National Fire Protection Agency, USA) : Health : 1 - Fire : 0 - Reactivity : 0
Hygroscopic compound. White colour.

- **CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES** (40 CFR 302.4): Not regulated.
- **SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES** (40 CFR 355.30) : Not regulated.
- **SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES** (40 CFR 355.40) : Not regulated.
- **SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES** (40 CFR 370.21): ACUTE: No / CHRONIC: No / FIRE: No / REACTIVE: No / SUDDEN RELEASE: No.
- **SARA TITLE III SECTION 313** (40 CFR 372.65): Not regulated.
- **OSHA PROCESS SAFETY** (29CFR1910.119): Not regulated.
- **STATE REGULATIONS:** California Proposition 65: Not regulated.

16. FURTHER INFORMATION (continued)

International status of the products included in, of this preparation :

- **Europ (EC):** REACH Status: Reach registered substance.
All the components are included in the EINECS.
This product is compliant with the following directives:
 - ∇ RoHS 2 (2015/863/UE) for Lead, Cadmium, Hexavalent Chromium, Mercury, Polybrominated diphenylethers, Polybrominated biphenyls, DEHP BBP DBP DIBP phthalates.
 - End Life Vehicles (ELV 2000/53/EC)
- **Australia:** Listed in the AICS.
- **Canada:** Domestic Substance List (DSL) registered.
- **China:** SEPA listed.
- **Japan:** All the components are listed in the MITI.
- **USA:** TSCA registered.
- **Philippines:** PICSS registered.
- **South Korea:** ECL/MOE Yes.

End of safety data sheet

The information contained herein is based on the present state of our knowledge, but without liability.

Modifications compared to the previous version: □ : Addition ∇ : Text modification.

1. EXTENDED SAFETY DATA SHEET OF NOVINOX PAT30

Chemical safety report was performed for NOVINOX PAT30 (See §16). Because of the NOVINOX PAT30 is no classified, it does not require risk management measures. In the annex below are the identified uses of the NOVINOX PAT30.

2. ANNEX : IDENTIFIED USES OF NOVINOX PAT30

1. Uses by workers in industrial settings

IU number	Identified use name	Process category	Environmental release category	Sector of end use	type of chemical product	Article category
2	Use as intermediate (for chemical reactions) or for formulation (e.g. mixing, blending) of preparations/materials	PROC 1 PROC 2 PROC 3 PROC 4 PROC 5 PROC 6 PROC 7 PROC 8a PROC 8b PROC 9 PROC 14	ERC 2 ERC 3 ERC 5 ERC 7	SU 10	PC 12	
3	Use as laboratory chemical	PROC 15	ERC 8c		PC 21	
4	use as additive/pigment/auxiliary in plastics/resins/paints	PROC 1 PROC 2 PROC 3 PROC 4 PROC 5 PROC 6 PROC 8a PROC 8b PROC 9	ERC 3 ERC 5 ERC 7 ERC 8c ERC 8f		PC 9a PC 32	
7	Use as fertilizer	PROC 2 PROC 8a PROC 8b PROC 9 PROC 13	ERC 9b	SU 1	PC12	

2. Uses by professional workers

IU number	Identified use name	Process category	Environmental release category	Sector of end use	Type of chemical product	Article category
3	Laboratory chemical	PROC 15		SU 24	PC 21	
4	Additive, pigment, auxiliary in plastics, resins, paints	PROC 1 PROC 2 PROC 3 PROC 4 PROC 5 PROC 6 PROC 7 PROC 8a PROC 8b PROC 9	ERC 8c ERC 8f		PC 9a PC 32	
7	Fertilizer	PROC 2 PROC 8a PROC 8b PROC 9 PROC 13	ERC 8b ERC 8e ERC 9b	SU 1	PC 0 PC 12	

3. Uses by consumers

IU number	Identified use name	Process category	Environmental release category	Sector of end use	Type of chemical product	Article category
8	Fertilizer				PC 12	

4. Use descriptor system glossary

SU1	Agriculture, forestry, fishery
SU10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU19	Building and construction work
SU24	Scientific research and development
PC9a	Coatings and paints, thinners, paint removers
PC12	Fertilizers
PC21	Laboratory Chemicals
PC32	Polymer Preparations and Compounds
PROC1	Use in closed process, no likelihood of exposure
PROC2	Use in closed, continuous process with occasional controlled exposure
PROC3	Use in closed batch process (synthesis or formulation)
PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC6	Calendering operations Industrial setting
PROC7	Industrial spraying
PROC8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC13	Treatment of articles by dipping and pouring
PROC14	Production of preparations* or articles by tableting, compression, extrusion, pelletisation
PROC15	Use a laboratory reagent, non-industrial setting
PROC26	Handling of solid inorganic substances at ambient temperature
ERC2	Formulation of preparations
ERC3	Formulation in materials
ERC5	Industrial use resulting in inclusion into or onto a matrix
ERC7	Industrial use of substances in closed systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
ERC8f	Wide dispersive outdoor use resulting in inclusion into or onto a matrix
ERC9b	Wide dispersive outdoor use of substances in closed systems

End of Extended Data Sheet