

**Safety Data Sheet**  
acc. to OSHA and ANSI

Printing date 09/25/2017

version 1

Reviewed on 09/25/2017

## 1 Identification

- **Product identifier**
- **Trade name:** NPS
- **Application of the substance / the mixture** Fertilizer
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Manufacturer:  
Rotem Amfert Negev Ltd.  
Mishor Rotem Plants  
M.P. Arava 8680600  
ISRAEL  
Tel: +972-86465635  
E-mail: Tamir.Richker@icl-group.com
- **Emergency telephone number:**  
In Israel call: +972-8-6504777 (24 hours a day, 365 days a year)  
+972-8-6504915

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1      H318 Causes serious eye damage.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Aquatic Acute 2 H401 Toxic to aquatic life.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05      GHS09

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
zinc sulphate (anhydrous)
- **Hazard statements**  
H318 Causes serious eye damage.  
H401 Toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P273 Avoid release to the environment.  
P280 Wear eye protection / face protection.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.

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P391 Collect spillage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	2
FIRE	0
REACTIVITY	0

Health = 2

Fire = 0

Reactivity = 0

· **Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

## 3 Composition/information on ingredients

· **Description:** Mixture of the substances listed below with nonhazardous additions.**components:**

CAS: 7704-34-9	Sulfur ⚠ Skin Irrit. 2, H315
CAS: 7733-02-0	zinc sulphate (anhydrous) ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302
CAS: 14808-60-7 RTECS: VV 7330000	Quartz (SiO <sub>2</sub> )
CAS: 7722-76-1	Ammonium dihydrogenorthophosphate
CAS: 7783-20-2 RTECS: BS 4500000	ammonium sulphate

· **Additional information:**

IARC: 14808-60-7 Silica dust, crystalline, in the form of quartz or cristobalite is listed

NTP: 14808-60-7 Silica, Crystalline (Respirable Size) Listed as a potential occupational carcinogen.

Amount of SiO<sub>2</sub> + insolubles in the product is less than 2%.

The product is in granular form and amount of respirable dust containing silica is negligible.

## 4 First-aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:**

Immediately rinse with water.

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- If symptoms persist consult doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.  
NOTE: Never give an unconscious person anything to drink.
  - **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed**  
Irritating to eyes.  
Gastric or intestinal disorders
  - **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

## 5 Fire-fighting measures

- **Suitable extinguishing agents:**  
The product is not flammable.  
CO<sub>2</sub>, powder or water spray.  
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Protective equipment:**  
Wear fully protective suit.  
Mount respiratory protective device.
- **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Ensure adequate ventilation  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Wear protective clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

### · PAC-1:

7733-02-0	zinc sulphate (anhydrous)	15 mg/m <sup>3</sup>
14808-60-7	Quartz (SiO <sub>2</sub> )	0.075 mg/m <sup>3</sup>

### · PAC-2:

7733-02-0	zinc sulphate (anhydrous)	97 mg/m <sup>3</sup>
14808-60-7	Quartz (SiO <sub>2</sub> )	33 mg/m <sup>3</sup>

### · PAC-3:

7733-02-0	zinc sulphate (anhydrous)	580 mg/m <sup>3</sup>
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14808-60-7 Quartz (SiO<sub>2</sub>)200 mg/m<sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Prevent formation of dust.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**  
No special measures required.  
The product is not flammable.
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**  
Do not store together with acids.  
Store away from oxidizing agents.  
Do not store together with alkalis (caustic solutions).  
Incompatible with copper and its alloys
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 14808-60-7 Quartz (SiO<sub>2</sub>)

PEL (USA)	see Quartz listing
REL (USA)	Long-term value: 0.05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.025* mg/m <sup>3</sup> *as respirable fraction
EL (Canada)	Long-term value: 0.025 mg/m <sup>3</sup> ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0.10* mg/m <sup>3</sup> *respirable fraction

- **Additional information:**  
Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m<sup>3</sup>, respirable particles, and 10 mg/m<sup>3</sup>, inhalable particles [ACGIH recommendation for Particles (Insoluble or poorly soluble). Not Otherwise Specified (PNOS)]
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Do not eat or drink while working.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Use suitable respiratory protective device in case of insufficient ventilation.

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Short term filter device:



Filter P2

· Protection of hands:



Protective gloves

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

· Body protection: Light weight protective clothing

· Limitation and supervision of exposure into the environment

The product is toxic for aquatic life.

Do not allow product to reach sewage system or any water course.

## 9 Physical and chemical properties

· Appearance:

**Form:** Granulate

**Color:** grey-green

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: 5-6

· Change in condition

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

· Flash point: Not applicable.

This product is inorganic substance.

· Flammability (solid, gaseous): Not determined.

· Ignition temperature:

**Decomposition temperature:** Thermal decomposition on losing water.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits: Not determined

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- **Oxidizing properties** None  
This product does not contain any oxidizing agents.
- **Vapor pressure:** Not applicable.
- **Density at 20 °C (68 °F):** 1-1.5 g/cm<sup>3</sup> (8.345-12.5 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with Water:** Partly soluble.
- **Partition coefficient (n-octanol/water):** Not applicable  
This substance is inorganic chemical.
- **Viscosity:** Not applicable  
This product is solid. Viscosity is only relevant to liquids.
- **Solvent content:**
- Organic solvents:** 0.0 %
- Solids content:** 100.0 %
- **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No decomposition if used according to specifications.
- **Chemical stability** No decomposition if used and stored according to specifications.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
Reacts with alkalis releasing ammonia.  
Reacts with strong acids and oxidizing agents.
- **Conditions to avoid** To avoid thermal decomposition do not overheat.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

### 7722-76-1 Ammonium dihydrogenorthophosphate

Oral	LD50	>2000 mg/kg (rat) (OECD 425)
Dermal	LD50	>5000 mg/kg (rat) (OECD 402)

### 7783-20-2 ammonium sulphate

Oral	LD50	4250 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/8h	>1200 mg/m <sup>3</sup> (rat)

### 7704-34-9 Sulfur

Oral	LD50	>2000 mg/kg (rat) (OECD 401)
Dermal	LD50	>2000 mg/kg (rat) (OECD 402, 4h)

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Inhalative	LC50/4 h	>5.43 mg/l (rat) (OECD 403)
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- **Primary irritant effect:**

- **Effect Species Method**

### 7722-76-1 Ammonium dihydrogenorthophosphate

Irritation of skin	OECD 404	not irritating (rabbit) (equivalent to OECD 404)
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Irritation of eyes	OECD 405, EC B.5	not irritating (rabbit) (equivalent to OECD 405)
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### 7704-34-9 Sulfur

Irritation of skin	OECD 404	irritant (rabbit)
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Irritation of eyes	OECD 405	not irritant (rabbit)
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Sensitization	OECD 406	not sensitizing (guinea pig)
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### 7733-02-0 zinc sulphate (anhydrous)

Irritation of skin	OECD 404	not irritant (rabbit)
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Irritation of eyes	OECD 405, EC B.5	irritant (rabbit)
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- **on the skin:** No irritant effect.

- **on the eye:** Strong irritant with the danger of severe eye injury.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

- **Mutagenicity:**

None

According to:

OECD 471 and OECD 473, 7783-28-0 diammonium hydrogenorthophosphate (DAP)

OECD TG 473 ames test, OECD 476 and OECD 473, 7783-20-2 ammonium sulphate

- **Carcinogenicity:** no classification is necessary

- **Toxicity for reproduction:**

no classification is necessary

read-across: for 7783-28-0 diammonium hydrogenorthophosphate (DAP):

reproductive toxicity: NOAEL > 1500 mg/kg bw/day; rat, oral (OECD 422)

developmental toxicity: NOAEL > 1500 mg/kg bw/day; rat, oral (OECD 422)

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

Toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** Low potential for bioaccumulation (based on substance properties)

- **Mobility in soil** Low potential for adsorption (based on substance properties).

- **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

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**13 Disposal considerations**· **Waste treatment methods**· **Recommendation:**

This product is used as fertiliser. However, large spills can kill vegetation. Prevent large quantities from entering waterways. If uncontaminated, sweep up or collect, and reuse as product. If contaminated with other materials, collect in suitable containers.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

· **Uncleaned packagings:**· **Recommendation:**

Packaging can be reused or recycled after cleaning.

Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport information**· **UN-Number**· **DOT, ADR, IMDG, IATA**

UN3077

· **UN proper shipping name**· **ADR**· **IMDG**

3077 Environmentally hazardous substances, solid, n.o.s.  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S., MARINE POLLUTANT

· **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S.

· **Transport hazard class(es)**· **DOT, ADR, IMDG, IATA**· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**· **DOT**

Void

· **ADR, IMDG, IATA**

III

· **Environmental hazards:**· **Marine pollutant:**

Yes

Symbol (fish and tree)

Symbol (fish and tree)

Symbol (fish and tree)

· **Special marking (ADR):**· **Special marking (IATA):**· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· **EMS Number:**

F-A,S-F

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

Not applicable.

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· **Transport/Additional information:**

· **DOT**

· **Remarks:**

· **UN "Model Regulation":**

Special marking with the symbol (fish and tree).

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES,  
SOLID, N.O.S., 9, III

## 15 Regulatory information

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7733-02-0 | zinc sulphate (anhydrous)

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14808-60-7 | Quartz (SiO<sub>2</sub>) | (respirable fraction) 0.025 mg/m<sup>3</sup>; A2

IARC: 14808-60-7 Silica dust, crystalline, in the form of quartz or cristobalite is listed

NTP: 14808-60-7 Silica, Crystalline (Respirable Size) Listed as a potential occupational carcinogen.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7 | Quartz (SiO<sub>2</sub>)

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

GHS09

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· **Signal word** *Danger*· **Hazard-determining components of labeling:***zinc sulphate (anhydrous)*· **Hazard statements***H318 Causes serious eye damage.**H401 Toxic to aquatic life.**H411 Toxic to aquatic life with long lasting effects.*· **Precautionary statements***P273 Avoid release to the environment.**P280 Wear eye protection / face protection.**P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P310 Immediately call a POISON CENTER/doctor.**P391 Collect spillage.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***16 Other information**· **Date of preparation / last revision** 09/25/2017 / -· **Disclaimer**

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