

Safety Data Sheet

acc. to OSHA and ANSI

Printing date 11/16/2017

2-800-26-017-US version 5

Reviewed on 11/16/2017

1 Identification

- **Product identifier**
- **Trade name:** Superphosphate, concentrated
- **Synonyms** Triple Superphosphate, TSP; Granulated Triple Superphosphate, GTSP; Granular TSP, TSP powder (TSP-ROP)
- **Article number:** Cat. No. 9725013921, 9725013920
- **CAS Number:**
65996-95-4
- **EC number:**
266-030-3
- **Application of the substance / the mixture** Fertilizer
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Rotem Amfert Negev Ltd.
Mishor Rotem Plants
M.P. Arava 86800
ISRAEL
Tel.: +972-86465343
E-mail: Amit.paz@icl-group.com
- **Information department:** E-mail: msdsinfo@icl-group.com
- **Emergency telephone number:** CHEMTREC : 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

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



GHS05

- **Signal word** Danger
- **Hazard statements**
H318 Causes serious eye damage.
- **Precautionary statements**
P280 Wear protective gloves / eye 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.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

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Trade name: *Superphosphate, concentrated*

· **HMIS-ratings (scale 0 - 4)**

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HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	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

- **Chemical characterization: Substances**
- **CAS No. Description**
65996-95-4 Superphosphates, concd >80%
- **Identification number(s)**
- **EC number:** 266-030-3
- **Additional information:** This product is a multi-constituent substance.

4 First-aid measures

- **General information:** Do not leave affected persons unattended.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Seek medical treatment.
- **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** Causes serious eye damage.
- **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.
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** None
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Phosphorus oxides (e.g. P₂O₅)
Sulfur oxides (SO_x)
Danger of toxic fluorine based pyrolysis products.
- **Protective equipment:**
Wear fully protective suit.

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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 product to reach sewage system or any water course.

· **Methods and material for containment and cleaning up:**

Pick up mechanically.

Damp down dust with water spray.

· **Reference to other sections**

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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:**

The product is not flammable.

No special measures required.

· **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 alkalis (caustic solutions).

Do not store together with urea.

· **Further information about storage conditions:**

Protect from humidity and water.

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:** Not required.

· **Additional information:**

Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m³, respirable particles, and 10 mg/m³, 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.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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· **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

Short term filter device:



Filter P2

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Butyl rubber, BR (0.7 mm)

Chloroprene rubber, CR (0.5 mm)

Nitrile rubber, NBR (0.4 mm)

· **Penetration time of glove material**

The exact break through 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

Boots

· **Limitation and supervision of exposure into the environment**

Based on all data available this product is not considered to pose a risk to the environment.

· **Risk management measures**

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

9 Physical and chemical properties

· **Appearance:**

Form: Crystalline powder
Granulate

Color: Grey
Light brown

· **Odor:** Acidic

· **pH-value (10 g/l) at 20 °C (68 °F):** 3.6

· **Change in condition**

Melting point/Melting range: Decomposes before melting.
Not applicable

Boiling point/Boiling range: The substance decomposes before boiling
Not applicable

· **Flash point:** Not applicable.
This product is inorganic substance.

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- **Flammability (solid, gaseous):** Product is not flammable.
(based on molecular structure)
- **Ignition temperature:** Not applicable
- **Decomposition temperature:** >200 °C (>392 °F)
Thermal decomposition on losing water.
- **Auto igniting:** Product is not selfigniting.
(based on molecular structure)
- **Danger of explosion:** Product does not present an explosion hazard.
(based on molecular structure)
- **Explosion limits:** None
- **Oxidizing properties:** None
The substance does not contain any groups associated with oxidising properties.
- **Vapor pressure at 20 °C (68 °F):** 8.4x10⁻⁷ Pa (OECD 104, EC A.4)
- **Density at 20 °C (68 °F):** 2.09 g/cm³ (17.441 lbs/gal) (OECD 109, EC A.3)
- **Bulk density at 20 °C (68 °F):** 1.0-1.2 g/cm³ (8.345-10.014 lbs/gal)
- **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.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
Reacts with alkali (lyes).
Mixing with urea causes formation of very sticky urea phosphate.
- **Chemical stability** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** To avoid thermal decomposition do not overheat.
- **Incompatible materials:**
Alkalis
Urea
- **Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.
Phosphorus oxides (e.g. P₂O₅)
Sulfur oxides (SO_x)
Danger of toxic fluorine based pyrolysis products.

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

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

No reliable study with this product is present.

This study is conducted on an analogous substance. (read-across)

7783-28-0 diammonium hydrogenorthophosphate

Oral	LD50	>2000 mg/kg (rat) (OECD 425)
Dermal	LD50	>2000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	>5 mg/l (rat) (OECD 403)

· **Primary irritant effect:**

· **Effect Species Method**

Irritation of eyes	OECD 405, EC B.5	Irritant (rabbit)
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7783-28-0 diammonium hydrogenorthophosphate

Sensitization	OECD 429, EC B.42	not sensitizing (mouse)
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7722-76-1 Ammonium dihydrogenorthophosphate

Irritation of skin	equivalent to OECD 404	not irritant (rabbit)
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· **Subacute to chronic toxicity:**

Oral NOAEL: 250 mg/kg bw day (rat) (OECD 422 (subacute))

This substance should not be classified for general toxicity

· **Toxicokinetics, metabolism and distribution**

This product dissociates into calcium, sulfate and phosphate ions, which are normal body and nutritional components.

· **Repeated dose toxicity no classification is necessary**

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

· **Mutagenicity:**

(acc to OECD 471 and OECD 473 tests with CAS 65996-95-4 TSP

and acc. to OECD 476 with CAS 7722-76-1 ammonium dihydrogenorthophosphate).

· **Carcinogenicity:**

no data available

(no carcinogenicity study needs to be performed as this substance is not genotoxic)

· **Toxicity for reproduction:**

no classification is necessary

reproductive toxicity: NOAEL: 750 mg/kg bw/day; rat, oral

developmental toxicity: NOAEL: 750 mg/kg bw/day; rat, oral

(OECD 422)

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure**

Oral	NOAEL	250 mg/kg bw/day (rat) (OECD 422 (subacute))
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12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

Inorganic phosphates are not considered to be toxic to aquatic species.

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7722-76-1 Ammonium dihydrogenorthophosphate

LC50/96 h (static) >85.9 mg/L (fish *Oncorhynchus mykiss*) (OECD 203, fresh water)

8011-76-5 Superphosphate (SSP)

LC50/72 h 1790 mg/L (*Daphnia carinata*) (Stand Meth for the Exam of Water and Wastewater)

65996-95-4 Superphosphates, concd (TSP)

EC50/72 h (static) >87.6 mg/L (algae) (OECD 201)
NOEC ≥87.6 mg/L

· **Persistence and degradability**

The substance is inorganic; therefore no biodegradation tests are applicable.

This product dissociates into calcium, sulfate and phosphate ions, which cannot be further degraded.

· **Other information:**

The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

· **Behavior in environmental systems:**

· **Bioaccumulative potential**

Does not accumulate in organisms

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

Ecotoxic effects:

Behavior in sewage processing plants:

Type of test	Effective concentration	Method	Assessment
Superphosphate (SSP 8011-76-5)			
EC50/3 h	>100 mg/L	(activated sludge)	(OECD 209, EC C.11)

Remark:

No reliable study with this product is present.

This study is conducted on an analogous substance. (read-across)

Inorganic phosphates are not considered to be toxic to sewage treatment plant microorganisms.

Results of PBT and vPvB assessment

PBT: No assessment is required for inorganic substances.

vPvB: No assessment is required for inorganic substances.

Other adverse effects No further relevant information available.

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.

Can be reused without reprocessing.

Disposal must be made in accordance with Local Authority requirements.

· **Uncleaned packagings:**

· **Recommendation:**

Packaging can be reused or recycled after cleaning.

Disposal must be made in accordance with Local Authority requirements.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

- UN-Number None
- UN proper shipping name None
- Transport hazard class(es)
- DOT, ADR, ADN, IMDG, IATA
- Class Void
- Packing group Not applicable
- Environmental hazards:
- Marine pollutant: No
- Special precautions for user Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- Transport/Additional information: Not dangerous according to the above specifications.
- UN "Model Regulation": Void

15 Regulatory information

- Sara
- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is listed.
- Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- Cancerogenity categories
- EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms



GHS05

- Signal word *Danger*
- Hazard statements
H318 Causes serious eye damage.
- Precautionary statements
P280 Wear protective gloves / eye 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.
- National regulations:
- Additional classification according to Decree on Hazardous Materials: None

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· **Registration status (Chemical Inventories listing) :**

United States (TSCA) : listed

Australia (AICS) : listed

Korea (KECI) : listed

China (IECSC) : listed

Europe (EINECS) : listed

New Zealand (NZIoC) : listed

Canada (NDSL): listed

Japan (ENCS) : not listed

Philippines (PICCS): not listed

NTP (National Toxicology Program) : Substance is not listed

IARC (International Agency for Research on Cancer) : Substance is not listed

* **16 Other information**

· **Date of preparation / last revision** 11/16/2017 / 4

· **Sources**

REACH dossier, 2010

REACH CSR, 2010

· * **Data compared to the previous version altered.**

The sections where alterations took place are marked with an asterisk in the left border.

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