

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name:** Superphosphate, concentrated (TSP)

· **Synonyms**

Triple Superphosphate, TSP; Granulated Triple Superphosphate, GTSP; Granular TSP; TSP powder (TSPROP); Super 45

· **CAS Number:**

65996-95-4

· **EC number:**

266-030-3

· **Registration number** 01-2119493057-33

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses:

Fertiliser

Processing aid/ Additive

Intermediate

No uses advised against.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

ICL Fertilizers Deutschland GmbH

Giulinistrasse 2

D-67065 Ludwigshafen

Telephone +49 621 5793 - 6

Telefax +49 621 5793 - 700

E-mail: msdsinfo@icl-group.com

ICL Fertilizers Europe C. V.

Fosfaatweg 48 1013 BM

P.O. Box 313, 1000 AH Amsterdam,

The Netherlands

Tel.: +31-(0)20-5815132

Fax: +31-(0)20-6868328

E-mail: msdsinfo@icl-group.com

· **1.4 Emergency telephone number:** In Europe call: +31-20-5815100 (24 hours a day, 365 days a year)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)


(Contd. of page 1)

- **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.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3 Substances**
- **CAS No. Description**
65996-95-4 Superphosphates, concd (TSP)
- **EC number:** 266-030-3
- **Additional information:** This product is a multi-constituent substance.

· **Components:**

CAS: 7758-23-8 EINECS: 231-837-1	Calcium bis(dihydrogenorthophosphate)	 Eye Dam. 1, H318	>62%
CAS: 7757-93-9 EINECS: 231-826-1	calcium hydrogenorthophosphate		>3%
CAS: 7778-18-9 EINECS: 231-900-3	calcium sulphate		>1%

- **SVHC** None

SECTION 4: First aid measures

- **4.1 Description of 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.
- **4.2 Most important symptoms and effects, both acute and delayed** Causes serious eye damage.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: *Superphosphate, concentrated (TSP)*

(Contd. of page 2)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
The product is not flammable.
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** *None*
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Phosphorus oxides (e.g. P₂O₅)
Sulphur oxides (SO_x)
Danger of toxic fluorine based pyrolysis products.
- **5.3 Advice for firefighters**
- **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.*

SECTION 6: Accidental release measures

- **6.1 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.
- **6.2 Environmental precautions:** *Do not allow product to reach sewage system or any water course.*
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Damp down dust with water spray.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
The product is not flammable.
No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **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.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

· 7.3 Specific end use(s) No further relevant information available.

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

· **DNELs**

For workers:

Long-term-systemic effects (inhalation) DNEL: 2.9 mg/m³

Long-term-systemic effects (dermal) DNEL: 4.2 mg/kg bw/day

For general population:

Long-term-systemic effects (inhalation) DNEL: 0.72 mg/m³

Long-term-systemic effects (oral) DNEL: 0.42 mg/kg bw/day

Long-term-systemic effects (dermal) DNEL: 2.1 mg/kg bw/day

· **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)]

· 8.2 Exposure controls

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

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.

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.



Filter P2

Filter FFP2

(EN 143 or EN 149)

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Butyl rubber, BR

Chloroprene rubber, CR

Nitrile rubber, NBR

· **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. (EN 374)

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 4)

· **Eye protection:**



Tightly sealed goggles (EN 166)

· **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.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Granulate

Colour: Grey

Light brown

· **Odour:**

Acidic

· **pH-value (10 g/l) at 20 °C:**

3,6

· **Change in condition**

Melting point/freezing point: Decomposes before melting.

Initial boiling point and boiling range: The substance decomposes before boiling

· **Flash point:**

Not applicable.

This product is inorganic substance.

· **Flammability (solid, gas):**

Product is not flammable.

(based on molecular structure)

· **Ignition temperature:**

Not applicable

· **Decomposition temperature:**

>200 °C

Thermal decomposition on losing water.

· **Auto-ignition temperature:**

Product is not selfigniting.

(based on molecular structure)

· **Explosive properties:**

Product does not present an explosion hazard.

(based on molecular structure)

· **Explosion limits:**

None

· **Oxidising properties**

None

The substance does not contain any groups associated with oxidising properties.

· **Vapour pressure at 20 °C:**

8.4x10⁻⁹ hPa (OECD 104, EC A.4)

· **Density:**

Not determined.

· **Bulk density at 20 °C:**

1,0-1,2 g/cm³

· **Relative density at 20 °C**

2.09 g/cm³ (OECD 109, EC A.3)

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 5)

- **Solubility in / Miscibility with water at 20 °C:** 1-100 g/l
- **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.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
No reliable study with this product is present.
This study is conducted on an analogous substance. (read-across)
no classification is necessary

7783-28-0 diammonium hydrogenorthophosphate

Oral	LD50	>2000 mg/kg (rat) (OECD 425)
Dermal	LD50	>5000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4	>4.84 mg/l (rat) (OECD 403, EC B2)

- **Primary irritant effect:**

- **Effect Species Method**

65996-95-4 Superphosphates, concd (TSP)

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

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

Irritation of skin	equivalent to OECD 404	not irritating (rabbit)
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- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 6)

- **Serious eye damage/irritation:**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Toxicokinetics, metabolism and distribution**
This product dissociates into calcium, sulfate and phosphate ions, which are normal body and nutritional components.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
Based on available data, the classification criteria are not met
(acc to OECD 471 and OECD 473 tests with CAS 65996-95-4 Superphosphate concentrated)
- **Carcinogenicity:**
no data available
- **Toxicity for reproduction:**
Based on available data, the classification criteria are not met
reproductive toxicity: NOAEL: 1500 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**
Based on available data, the classification criteria are not met.

65996-95-4 Superphosphates, concd (TSP)

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

- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
Inorganic phosphates are not considered to be toxic to aquatic species.

7722-76-1 Ammonium dihydrogenorthophosphate

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

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

- **12.2 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.
- **12.3 Bioaccumulative potential**
Does not accumulate in organisms
This substance is highly water soluble and dissociating.
- **12.4 Mobility in soil** Low potential for adsorption (based on substance properties).

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 7)

- **Ecotoxicological effects:**
- **Behaviour in sewage processing plants:**

Type of test	Effective concentration	Method	Assessment
8011-76-5 Superphosphate (SSP)			
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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** No assessment is required for inorganic substances.
- **vPvB:** No assessment is required for inorganic substances.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 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.

European waste catalogue	
06 09 03*	calcium-based reaction wastes containing or contaminated with hazardous substances

- **Uncleaned packaging:**
- **Recommendation:**
Packaging may be reused or recycled after cleaning.
Disposal must be made in accordance with Local Authority requirements.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **14.2 UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **14.3 Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **DOT, ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

· UN "Model Regulation":

Void

(Contd. of page 8)

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Directive 2000/60 EC (phosphates)

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **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, Annex II: None**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57 None**

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

Thailand (TECI) : not listed

Taiwan (TCSI) : not listed

Philippines (PICCS): not listed

Japan (ENCS) : not listed

Canada (NDSL): listed

New Zealand (NZIoC) : listed

United States (TSCA) : listed

Australia (AICS) : listed

Korea (KECI) : listed

China (IECSC) : listed

NTP (National Toxicology Program) : Substance is not listed

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

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

· **Relevant phrases**

H318 Causes serious eye damage.

· **Department issuing SDS:**

HERA Division

telephone: +/972-8-6297835

telefax: +/972-8-6297832

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 9)

e-mail: msdsinfo@icl-group.com

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

NOAEL: No Observable Adverse Effect Level

NOEC: No Observable Effect Concentration

OECD: Organisation for Economic Co-operation and Development

Sources

REACH CSR, 2016

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

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

Disclaimer

Although the information and recommendations set forth herein (hereinafter 'information') are presented in good faith and believed to be correct as of the date hereof, we make no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will we be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information.

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Annex: Exposure scenario 1

Short title of the exposure scenario Manufacture of substances

Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Environmental release category ERC1 Manufacture of the substance

Description of the activities / processes covered in the Exposure Scenario

All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 10)

- **Conditions of use**
- **Duration and frequency**
Frequency of use:
5 workdays/week
> 4 hrs (>half working shift).
- **Environment**
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Physical parameters**
- **Physical state**
Solid in various forms
Liquid
Low dustiness
- **Used amount per time or activity** Not applicable
- **Other operational conditions**
- **Other operational conditions affecting worker exposure**
Indoor application.
Normally no personal respiratory protection required.
- **Risk management measures**
- **Worker protection**
- **Technical protective measures**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Personal protective measures**
Tightly sealed goggles (EN 166)
Avoid contact with the eyes.
- **Disposal measures**
- **Waste type** 06 09 03* calcium-based reaction wastes containing or contaminated with dangerous substances
- **Exposure estimation**
A qualitative approach was used to conclude safe use for workers.
The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.
- **Environment**
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Guidance for downstream users**
No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for workers.
- **Additional good practices advice beyond the REACH CSA:**
Keep good industrial hygiene.
Use suitable respiratory protective device in case of insufficient ventilation.
Management/supervision in place to check that RMMs in place are being used correctly and OCs followed
Training staff on good practice
.....

Annex: Exposure scenario 2

- **Short title of the exposure scenario**
Industrial use for formulation of preparations, intermediate use and end-use in industrial settings.
- **Sector of Use** SU8 Manufacture of bulk, large scale chemicals (including petroleum products)

(Contd. on page 12)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 11)

· **Product category**

PC9b Fillers, putties, plasters, modelling clay

PC12 Fertilisers

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC32 Polymer preparations and compounds

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC13 Treatment of articles by dipping and pouring

PROC14 Tableting, compression, extrusion, pelletisation, granulation

PROC15 Use as laboratory reagent

PROC28 Manual maintenance (cleaning and repair) of machinery

· **Environmental release category**

ERC2 Formulation into mixture

ERC3 Formulation into solid matrix

ERC6a Use of intermediate

ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)

· **Description of the activities / processes covered in the Exposure Scenario**

All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.

· **Conditions of use**

· **Duration and frequency**

Frequency of use:

5 workdays/week

> 4 hrs (>half working shift).

· **Environment**

An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.

· **Physical parameters**

· **Physical state**

Solid

Liquid

Low dustiness

· **Used amount per time or activity** Not applicable

· **Other operational conditions**

· **Other operational conditions affecting worker exposure**

Indoor application.

Normally no personal respiratory protection required.

· **Risk management measures**

· **Worker protection**

· **Organisational protective measures** Not applicable

· **Technical protective measures**

Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 13)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 12)

Prevent formation of dust.

· **Personal protective measures**

Tightly sealed goggles (EN 166)

Avoid contact with the eyes.

· **Disposal measures**

· **Waste type** 06 09 03* calcium-based reaction wastes containing or contaminated with dangerous substances

· **Exposure estimation**

A qualitative approach was used to conclude safe use for workers.

The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.

· **Environment**

An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.

· **Guidance for downstream users**

No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for workers.

· **Additional good practices advice beyond the REACH CSA:**

Keep good industrial hygiene.

Use suitable respiratory protective device in case of insufficient ventilation.

Management/supervision in place to check that RMMs in place are being used correctly and OCs followed

Training staff on good practice

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Annex: Exposure scenario 3

· **Short title of the exposure scenario** Professional use in formulation of preparations and end-use in fertiliser

· **Sector of Use**

SU1 Agriculture, forestry, fishery

SU13 Manufacture of other non-metallic mineral products, e.g. plasters, cement

· **Product category**

PC9b Fillers, putties, plasters, modelling clay

PC12 Fertilisers

· **Process category**

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC11 Non industrial spraying

PROC15 Use as laboratory reagent

PROC19 Manual activities involving hand contact

· **Environmental release category**

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)

ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

ERC8f Widespread use leading to inclusion into/onto article (outdoor)

· **Description of the activities / processes covered in the Exposure Scenario**

All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.

(Contd. on page 14)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

2-800-26-017-EU version 8

Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 13)

- **Conditions of use**
- **Duration and frequency**
Frequency of use:
5 workdays/week
> 4 hrs (>half working shift).
- **Environment**
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Physical parameters**
- **Physical state**
Solid
Liquid
Low dustiness
- **Other operational conditions**
- **Other operational conditions affecting worker exposure**
Indoor application.
Outdoor application.
Normally no personal respiratory protection required.
- **Risk management measures**
- **Worker protection**
- **Technical protective measures**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
Avoid splashing. Use specific dispensers and pumps specifically designed to prevent splashes/spills/exposure to occur.
- **Personal protective measures** Tightly sealed goggles (EN 166)
- **Disposal measures**
- **Waste type** 06 09 03* calcium-based reaction wastes containing or contaminated with dangerous substances
- **Exposure estimation**
A qualitative approach was used to conclude safe use for workers.
The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.
- **Environment**
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Guidance for downstream users**
No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for workers.
- **Additional good practices advice beyond the REACH CSA:**
Management/supervision in place to check that RMMs in place are being used correctly and OCs followed
Training staff on good practice
Keep good industrial hygiene.
Use suitable respiratory protective device in case of insufficient ventilation.

Annex: Exposure scenario 4

- **Short title of the exposure scenario** Consumer end-use of fertilisers and other products
- **Product category**
PC9b Fillers, putties, plasters, modelling clay
PC12 Fertilisers

(Contd. on page 15)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.02.2018

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Revision: 18.02.2018

Trade name: Superphosphate, concentrated (TSP)

(Contd. of page 14)

· **Environmental release category**

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)

ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)

ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

ERC8f Widespread use leading to inclusion into/onto article (outdoor)

· **Description of the activities / processes covered in the Exposure Scenario** Distributing of fertilizers

· **Conditions of use**

· **Duration and frequency** Not applicable

· **Environment**

An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.

· **Physical parameters**

· **Physical state**

Solid

Liquid

Low dustiness

· **Used amount per time or activity** Not applicable

· **Other operational conditions**

· **Other operational conditions affecting worker exposure**

Indoor application.

Outdoor application.

· **Risk management measures**

· **Worker protection**

· **Personal protective measures** Safety glasses

· **Disposal measures**

· **Waste type 06 09 03***: calcium-based reaction wastes containing or contaminated with hazardous substances

· **Exposure estimation**

A qualitative approach was used to conclude safe use for workers.

The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.

· **Environment**

An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.

· **Guidance for downstream users**

No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for consumers.

· **Additional good practices advice beyond the REACH CSA:**

Prevent formation of dust.

Wear protective gloves/eye protection.

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