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Version	:	4.0

SAFETY DATA SHEET

TSP 0-46-0

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

1.1 Product identifier

Product name	:	TSP 0-46-0
EC number	:	266-030-3
REACH Registration number	:	01-2119493057-33
CAS number	:	65996-95-4
Product code	:	PL503G
Product type	:	solid

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

Identified uses
Professional formulation of fertiliser products. Professional distribution. Professional USE as a laboratory/research chemical. Professional USE as chemical/process nutrient. Professional USE as fertiliser at Farm - loading and spreading. Professional USE as fertiliser in Greenhouse. Professional USE as liquid fertiliser in open field (e.g. Fertigation). Professional USE as fertiliser - maintenance of equipment. Industrial USE to formulate chemical product mixtures. Industrial distribution.

Uses advised against	:	Other non-specified industry
Reason	:	Due to lack of related experience or data, the supplier cannot approve this use.

1.3 Details of the supplier of the safety data sheet

Yara Hellas S.A.

Address

Street	:	Syngrou Avenue Nea Smyrni
Number	:	143
Postal code	:	17121

City	:	Athens
Country	:	Greece
Telephone number	:	+30 210 9370355
Fax no.	:	+30 210 9370357
e-mail address of person responsible for this SDS	:	info.hellas@yara.com

1.4 Emergency telephone number

National advisory body/Poison Center

Name	:	Κέντρο Δηλητηριάσεων Κύπρου/Poison Control Center Cyprus
Telephone number	:	1401
Hours of operation	:	24/7

Supplier

Emergency telephone number (with hours of operation)	:	+30 2111 983 182 (7/24)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture.

Product definition : Multi-constituent substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification : Eye Dam. 1, H318

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements	:	H318	Causes serious eye damage.
		H318	Causes serious eye damage.

Precautionary statements

Prevention	:	P280	Wear protective gloves and eye protection.
Response	:	P305	IF IN EYES:
		P351	Rinse cautiously with water for several minutes.
		P338	Remove contact lenses, if present and easy to do. Continue rinsing.
		P310	Immediately call a POISON CENTER or doctor/physician.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None.

SECTION 3: Composition/information on ingredients

3.1 Substances : Multi-constituent substance

Product name : No tradename available.

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
TSP 0-46-0	RRN: 01-2119493057-33 EC: 266-030-3 CAS : 65996-95-4	100	Eye Dam. 1, H318	[*]
calcium bis(dihydrogenorthophosphate)	RRN: 01-2119490065-39EC: 231-837-1 CAS : 7758-23-8	>= 65 - < 70	Eye Dam. 1, H318	[A]

Type
[*] Substance
[A] Constituent
[B] Impurity
[C] Stabilizing additive

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Remarks : (*) Multi-constituent substance

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately.

Inhalation : If inhaled, remove to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

Skin contact : Wash with soap and water. Get medical attention if irritation develops.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None identified.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : No specific fire or explosion hazard.

Hazardous combustion products : Decomposition products may include the following materials:
sulfur oxides
phosphorus oxides
metal oxide/oxides
Avoid breathing dusts, vapors or fumes from burning materials.
In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from

upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Not for human or animal consumption.

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Recommendations : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Remark : No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Reference should be made to monitoring standards, such as the following:
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)
European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)
European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)
Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
calcium bis(dihydrogenorthophosphate)	DNEL	Long term Inhalation	4,07 mg/m³	Workers	Systemic

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: Tightly-fitting goggles, CEN: EN166,

Skin protection

Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. > 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.
Body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
Other skin protection	:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	:	In case of inadequate ventilation wear respiratory protection. Recommended Filter P2 (EN 143)
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Personal protective equipment (Pictograms)	:	

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	solid
Color	:	Pale brown., Gray.,
Odor	:	Acrid.
Odor threshold	:	Not determined.
pH	:	3,6 [Conc. (% w/w): 10 g/l]
Melting point/freezing point	:	Not determined
Initial boiling point and boiling range	:	Decomposes: > 200 °C
Flash point	:	Not determined
Evaporation rate	:	Not determined
Flammability (solid, gas)	:	Non-flammable.
Upper/lower flammability or explosive limits	:	**Lower:** Not determined **Upper:** Not determined

Vapor pressure	:	0,000084 hPa @ 20 °C
Vapor density	:	Not determined
Relative density	:	2,09 @ 20 °C
Bulk density	:	Not determined
Density	:	2,09 g/cm3 @ 20 °C
Solubility(ies)	:	1 - 100 g/l Partially soluble in the following materials: cold water
Partition coefficient: n-octanol/water	:	Not determined
Auto-ignition temperature	:	Not determined
Viscosity	:	**Dynamic:** Not determined. **Kinematic:** Not determined.
Explosive properties	:	Non-explosive.
Oxidizing properties	:	None

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	The product is stable.
10.3 Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Avoid contamination by any source including metals, dust and organic materials.
10.5 Incompatible materials	:	May react or be incompatible with alkalis.No specific data.
Remark	:	Urea
10.6 Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Method	Species	Result	Exposure	References
calcium bis(dihydrogenorthophosphate)					
	LD50 Oral	Rat	3.986 mg/kg	Not applicable.	IUCLID
	LD50 Dermal	Rabbit	> 5.000 mg/kg	Not applicable.	

Conclusion/Summary : Not toxic.

Irritation/Corrosion

Product/ingredient name	Method	Species	Result	Exposure	References
calcium bis(dihydrogenorthophosphate)					
	OECD 405 Eyes	Rabbit	Severe irritant		CSR

Conclusion/Summary
Skin : No known significant effects or critical hazards.
Eyes : Causes serious eye damage.
Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary
Skin : Not determined.
Respiratory : Not determined.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Ingestion : May cause burns to mouth, throat and stomach.

Skin contact : No known significant effects or critical hazards.

Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : No specific data.

Skin contact : No specific data.

Eye contact : Adverse symptoms may include the following: pain watering redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Adverse health effects are considered unlikely, when the product is used according to directions.

Potential delayed effects : None identified.

Long term exposure

Potential immediate effects : Adverse health effects are considered unlikely, when the product is used according to directions.

Potential delayed effects : None identified.

Potential chronic health effects

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Effects on or via lactation : No known significant effects or critical hazards.

Other effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Method	Species	Result	Exposure	References
calcium bis(dihydrogenorthophosphate)					
	OECD 202 Acute EC50 Fresh water	Daphnia	> 100 mg/l	48 h	CSR

Conclusion/Summary : Practically non-toxic to aquatic organisms.

12.2 Persistence and degradability

Conclusion/Summary : Readily biodegradable in plants and soils. The product does not show any bioaccumulation phenomena.

12.3 Bioaccumulative potential

Conclusion/Summary : This product is not expected to bioaccumulate through food chains in the environment.

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
06 10 02*	wastes containing hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way.
Care should be taken when handling emptied containers that have not been cleaned or rinsed out.
Empty containers or liners may retain some product residues.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Regulation: ADR/RID	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	No.

Additional information

Regulation: ADN	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	No.
Additional information	
Danger code : Not applicable.	

Regulation: IMDG	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	No.
Additional information	
Marine pollutant : No.	

Regulation: IATA	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	No.
Additional information	
Marine pollutant : No.	

14.6 Special precautions for user : Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

14.8 IMSBC

Bulk cargo shipping name : Triple superphosphate
Class : Not applicable.
Group : C
Marpol V : Non-HME

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV: None of the components are listed.

Substances of very high concern: None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

None of the components are listed.

Prior Informed Consent (PIC) (649/2012/EU)

None of the components are listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Biocidal products regulation : Not applicable.

Notes : To our knowledge no other country or state specific regulations are applicable.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Abbreviations and acronyms :
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
PBT = Persistent, Bioaccumulative and Toxic
vPvB = Very Persistent and Very Bioaccumulative
bw = Body weight

Key data sources :
EU REACH IUCLID5 CSR.
National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
Sphera Solutions Inc., 4777 Levy Street, St Laurent,

Quebec HAR 2P9, Canada.
Regulation (EC) No 1272/2008 Annex VI.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Dam. 1, H318	Expert judgment

Full text of abbreviated H statements

H318	Causes serious eye damage.

Full text of classifications [CLP/GHS]

Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

Revision comments	:	The following sections contain new and updated information: 11, 12.
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Version	:	4.0
Prepared by	:	Yara Chemical Compliance (YCC).

|| Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.

Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario/Safe Use Information:

Identification of the substance or mixture

Product definition : Multi-constituent substance

Product name : TSP 0-46-0

Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario:

Section 1 — Title

Short title of the exposure scenario	:	Yara - Triple superphosphates - Professional
Identified use name	:	Professional formulation of fertiliser products. Professional USE as fertiliser at Farm - loading and spreading. Professional USE as fertiliser in Greenhouse. Professional USE for dilution or suspension of liquid or solid fertilizers. Professional USE as liquid fertiliser in open field (e.g. Fertigation). Professional USE as fertiliser - maintenance of equipment.
Substance supplied to that use in form of	:	As such, In a mixture

List of use descriptors

Process Category	:	PROC02, PROC08a, PROC08b, PROC09, PROC13, PROC19
Environmental Release Category	:	ERC08b, ERC08d, ERC08e
Market sector by type of chemical product	:	PC12, PC20
Sector of end use	:	SU22

Number of the ES	:	YESWTSP003

Section 2 — Exposure controls

Contributing scenario controlling environmental exposure for: All

This product is not classified according to EU legislation., No exposure assessment presented for the

environment.

Contributing scenario controlling worker exposure for:

Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100% (unless stated differently)., Liquids > 25 %
Physical state	:	Solid. Liquid.
Dust	:	Solid, low dustiness
Frequency and duration of use	:	Covers daily exposures up to 8 hours, Covers frequency up to: daily, weekly, monthly, yearly use.
Human factors not influenced by risk management	:	Not applicable.
Area of use:	:	Indoor or outdoor use
Technical conditions and measures at process level (source) to prevent release	:	Observe the usage/storage instructions.
Technical conditions and measures to control dispersion from source towards the worker	:	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Engineering controls	:	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings., Only allow access to authorised persons.
Ventilation control measures	:	Only use product in a well-ventilated area., Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan., Ensure the ventilation system is regularly maintained and tested.
Product substance-related measures	:	Store in a dry place., Store in a closed container., Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10)., Store in accordance with all local, regional, national and international regulations.
Product safety-related measures	:	Avoid contact with eyes., Wear eye or face protection.
Organizational measures to prevent/limit releases, dispersion and exposure	:	Only allow access to authorised staff., Extraction:, Use appropriate containment to avoid environmental contamination., If necessary:, Use complete process isolation technology., Automate activity where possible., Ensure operatives are trained to minimise exposures., No action shall be taken involving any personal risk or without suitable training., Ensure control measures are regularly inspected and maintained.

Conditions and measures related to personal protection and hygiene

Personal protection	:	Avoid breathing dust or mist., Avoid contact with skin and eyes., Wear eye/face protection., Wear suitable coveralls to prevent exposure to the skin., See Section 8 of the safety data sheet (personal protective equipment).
Respiratory protection	:	No personal respiratory protective equipment normally required., If ventilation is inadequate, use respirator that will protect against dust/mist., See Section 8 for information on appropriate personal protective equipment.

Section 3 — Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment:

Exposure assessment (environment):	:	Qualitative approach used to conclude safe use.

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	:	See Section 8 in SDS, PNEC.

Exposure estimation and reference to its source - Workers:

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	:	Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted. See Section 8 in SDS, DNEL.

Section 4 — GUIDANCE TO DU TO EVALUATE WHETHER HE WORKS INSIDE THE BOUNDARIES SET BY THE ES

Environment	:	The product is not expected to harm the environment when used properly according to directions.
Health	:	Refer to special instructions/safety data sheet.

Abbreviations and acronyms

Process Category	:	PROC02 - Use in closed, continuous process with occasional controlled exposure PROC08a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC08b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC09 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available
Environmental Release Category	:	ERC08b - Wide dispersive indoor use of reactive substances in open systems ERC08d - Wide dispersive outdoor use of processing aids in open systems ERC08e - Wide dispersive outdoor use of reactive substances in

		open systems
Market sector by type of chemical product	:	PC12 - Fertilizers PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents
Sector of end use	:	SU22 - Professional uses

Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario:

Section 1 — Title

Short title of the exposure scenario	:	Yara - Triple superphosphates - Industrial
Identified use name	:	Industrial USE to formulate fertilisers product mixtures. Industrial USE to formulate chemical product mixtures. Industrial distribution.
Substance supplied to that use in form of	:	As such, In a mixture

List of use descriptors

Process Category	:	PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC13, PROC14, PROC15
Environmental Release Category	:	ERC02, ERC05
Market sector by type of chemical product	:	PC12
Sector of end use	:	SU01, SU03, SU10
Subsequent service life relevant for that use	:	No.

Number of the ES	:	YESWTSP002
Industry Association	:	Not applicable.
Processes and activities covered by the exposure scenario	:	Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities. Use of the substance within laboratory settings within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning. Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities. Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems. Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities. Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.
Additional information	:	Not applicable.

Section 2 — Exposure controls

Contributing scenario controlling environmental exposure for: All

Product characteristics	:	Solid
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100% (unless stated differently)., aqueous preparations
Frequency and duration of use	:	8 h (full shift). Covers frequency up to: daily, weekly, monthly, yearly use.
Other conditions affecting environmental exposure	:	Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Air emission controls are not appliable as there is no direct release to air., Soil emission controls are not applicable as there is no direct release to soil.
Risk management measures - Air	:	Not applicable.
Risk management measures - Water	:	Dispose of waste in accordance with environmental legislation.
Organizational measures to prevent/limit release from site	:	Prevent leaks and prevent soil/water pollution caused by leaks., Prevent entry into sewers, basements or confined areas. Dike if necessary.
Conditions and measures related to sewage treatment plant	:	Risk from exposure via the aquatic environment is driven by effluent releases to freshwater.
Conditions and measures related to external treatment of waste for disposal	:	Neutralisation is normally necessary before waste water is discharged into water treatment plants.
Suitable waste treatment	:	Not applicable.
Waste management measures - Water	:	pH adjustment, Do not release undiluted and unneutralised into the sewer.
Waste management measures - Gas.	:	Not applicable.
Conditions and measures related to external recovery of waste	:	Not applicable.
Suitable recovery operations	:	Not applicable.

Contributing scenario controlling worker exposure for:

Product characteristics	:	Acidic corrosive material
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100% (unless stated differently)., In liquid preparations > 25 %

Physical state	:	Solid. Liquid.
Dust	:	Solid, low dustiness
Frequency and duration of use	:	Covers daily exposures up to 8 hours, Covers frequency up to: daily, weekly, monthly, yearly use.
Human factors not influenced by risk management	:	Not applicable.
Other conditions affecting workers exposure	:	Not applicable.
Area of use:	:	Indoor or outdoor use
Technical conditions and measures at process level (source) to prevent release	:	Observe the usage/storage instructions.
Technical conditions and measures to control dispersion from source towards the worker	:	Ensure control measures are regularly inspected and maintained., Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions., Ensure dedicated sample points are provided.
Engineering controls	:	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings., Only allow access to authorised persons.

Ventilation control measures	:	Only use product in a well-ventilated area., Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan., Ensure the ventilation system is regularly maintained and tested.
Product substance-related measures	:	Observe technical data sheet/instructions for use.
Product safety-related measures	:	Do not breathe gas/vapour/aerosol., Wear eye or face protection., Avoid contact with eyes., Avoid contact with skin and mucous membranes.
Organizational measures to prevent/limit releases, dispersion and exposure	:	Only allow access to authorised staff., Extraction:, Use appropriate containment to avoid environmental contamination., If necessary:, Use complete process isolation technology., Automate activity where possible., Ensure operatives are trained to minimise exposures., No action shall be taken involving any personal risk or without suitable training., Ensure control measures are regularly inspected and maintained.

Conditions and measures related to personal protection and hygiene

Personal protection	:	Wear eye/face protection., Face shield., Splash goggles., Use safety eyewear designed to protect against splash of liquids., CEN: EN166, Wear suitable gloves (tested to EN374), coverall and eye protection., See Section 8 of the safety data sheet (personal protective equipment).
Respiratory protection	:	No personal respiratory protective equipment normally required., If ventilation is inadequate, use respirator that will protect against dust/mist., Filter P2SL (EN 143, 140), acid gas filter (Type E), Self-contained respirator (DIN EN 133)

Section 3 — Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment:

Exposure assessment (environment):	:	Qualitative approach used to conclude safe use.
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	:	Not applicable.

Exposure estimation and reference to its source - Workers:

Exposure assessment (human):	:	Qualitative approach used to conclude safe use.
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	:	Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. See Section 8 in SDS, DNEL.

Section 4 — GUIDANCE TO DU TO EVALUATE WHETHER HE WORKS INSIDE THE BOUNDARIES SET BY THE ES

Environment	:	The product is not expected to harm the environment when used properly according to directions., No additional risk management measures required.
Health	:	Risk management measures, In accordance with, Classification and labeling according to Regulation (EC) 1272/2008 (CLP)

Abbreviations and acronyms

Process Category	:	PROC02 - Use in closed, continuous process with occasional controlled exposure PROC03 - Use in closed batch process (synthesis or formulation) PROC04 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC08a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC08b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC09 - 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 tabletting, compression, extrusion, pelletisation PROC15 - Use a laboratory reagent
Environmental Release	:	ERC02 - Formulation of preparations ERC05 - Industrial use resulting in inclusion into or onto a matrix

Category		
Market sector by type of chemical product	:	PC12 - Fertilizers
Article category related to subsequent service life	:	- Not applicable.
Sector of end use	:	SU01 - Agriculture, forestry, fishery SU03 - Industrial uses SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)