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

· **1.1 Product identifier**

· **Trade name: Nova SOP**
· **Synonyms** Sulfuric acid, dipotassium salt; dipotassium sulphate; potassium sulphate
· **CAS Number:**
7778-80-5
· **EC number:**
231-915-5
· **Registration number** 01-2119489441-34
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses:
Fertiliser
No uses advised against.

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Rotem Amfert Negev Ltd.
ICL Specialty Fertilizers
Mishor Rotem, Mobile Post Arava 86800
ISRAEL
Phone: +972-4-8468115
E-mail: Royie.Mashiah@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** The substance is not classified according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
7778-80-5 potassium sulfate ≥95%
· **EC number:** 231-915-5
· **SVHC** None

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.

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

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
The product is not flammable.
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.
Sulphur oxides (SOx)
Toxic metal compounds (K_2O)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
· **Additional information**
Cool endangered receptacles with water spray.
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
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.
Dispose of the material collected according to regulations.
· **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.

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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.
Store in dry conditions.
· **Information about storage in one common storage facility:**
Do not store together with acids.
Do not store together with alkalis (caustic solutions).
· **Further information about storage conditions:**
Protect from humidity and water.
Protect from heat and direct sunlight.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:**
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)]

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:** Not required.
· **DNELs**
For workers:
Long-term-systemic effects (dermal) DNEL: 21.3 mg/kg bw/day
Long-term-systemic effects (inhalation) DNEL: 37.6 mg/m³
For general population:
Long-term-systemic effects (dermal) DNEL: 12.8 mg/kg bw/day
Long-term-systemic effects (inhalation) DNEL: 11.1 mg/m³
Long-term-systemic effects (oral) DNEL: 12.8 mg/kg bw/day
· **PNECs**
PNEC aqua (freshwater): 0.68 mg/L
PNEC aqua (marine water): 0.068 mg/L
PNEC aqua (intermittent releases): 6.8 mg/L
PNEC STP: 10 mg/L

· **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.
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

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· **Protection of hands:**



Protective gloves

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. (EN 374)
· **Eye protection:**



Safety glasses

· **Body protection:** Light weight protective clothing
· **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:	Powder
Colour:	White Grey
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable
· **pH-value (10 g/l) at 20 °C:**	4
· **Change in condition**	
Melting point/Melting range:	1067 °C (at 1013 hPa)
Boiling point/Boiling range:	(melting point >300 °C) Not determined
· **Flash point:**	Not applicable. This product is inorganic substance.
· **Flammability (solid, gaseous):**	Product is not flammable. (based on molecular structure)
· **Ignition temperature:**	Not applicable
· **Decomposition temperature:**	1089 °C
· **Self-igniting:**	Product is not selfigniting. (based on molecular structure)

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· **Danger of explosion:** Product does not present an explosion hazard.
(based on molecular structure)

· **Explosion limits:** None
· **Oxidising properties** The substance does not contain any groups associated with oxidising properties.
None

· **Vapour pressure:** Not applicable
· **Density at 20 °C:** 2,66 g/cm³

· **Bulk density at 20 °C:** 1200-1400 kg/m³
· **Vapour density** Not applicable.
· **Evaporation rate** Not applicable.
This product is an inorganic solid

· **Solubility in / Miscibility with water at 25 °C:** 120 g/l

· **Partition coefficient (n-octanol/water):** This substance is inorganic chemical.
Not applicable

· **Viscosity:** This product is solid. Viscosity is only relevant to liquids.
Not applicable
· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No decomposition if used according to specifications.
· **10.2 Chemical stability** No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid**
Protect from moisture.
Keep away from heat and direct sunlight.
· **10.5 Incompatible materials:**
Alkalis
Acids
· **10.6 Hazardous decomposition products:**
Formation of toxic gases is possible during heating or in case of fire.
Sulphur oxides (SOx)
Toxic metal compounds (K_2O)

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**

· **LD/LC50 values relevant for classification:**		
17855-14-0 sulphuric acid, magnesium potassium salt		
Oral	LD50	>2000 mg/kg (rat) (OECD 425)
7778-80-5 potassium sulfate		
Dermal	LD50	>2000 mg/kg (rat) (OECD 402, EC B.3, EPA)

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7783-20-2 ammonium sulphate		
Inhalative	LC50/8h	>1200 mg/m³ (rat)

· **Primary irritant effect:**

· **Effect Species Method**		
7487-88-9 magnesium sulphate		
Sensitisation	OECD 429, EC B.42	none (mouse)
7778-80-5 potassium sulfate		
Irritation of eyes	OECD 405, EC B.5	none (rabbit)

· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Toxicokinetics, metabolism and distribution**
This substance is not considered to have bioaccumulative potential as it is highly soluble in water
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity**
None
acc. to OECD 471, OECD 473 (CAS 7778-80-5 potassium sulfate)
acc to OECD 476 (CAS 7783-20-2 ammonium sulphate)
· **Carcinogenicity:**
None
(acc. to OECD 453 test, CAS 7783-20-2 Ammonium sulphate)
· **Toxicity for reproduction:**
no classification is necessary
reproductive toxicity: NOAEL: ≥1500 mg/kg bw/day; rat, oral
developmental toxicity: NOAEL: ≥1500 mg/kg bw/day; rat,oral
(OECD 422)
· **STOT-single exposure** Based on available data, classification criteria are not met.

· **STOT-repeated exposure**		
7783-20-2 ammonium sulphate		
Oral	NOAEL	256 mg/kg bw/day (rat) (OECD 453, chronic)
7778-80-5 potassium sulfate		
Oral	NOAEL	1500 mg/kg bw/day (rat) (OECD 422, 28 days)

Based on available data, the classification criteria are not met.
· **Aspiration hazard** No data available

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
7778-80-5 potassium sulfate	
EC50/48 h (static)	720 mg/L (Daphnia magna) (EPA, freshwater)
LC50/96 h (static)	680 mg/L (Fathead minnow fish) (EPA, freshwater)
7783-20-2 ammonium sulphate	
LC50/72 h (static)	2700 mg/L (algae) (OECD, freshwater) NOEC ≥ 100 mg/L

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· **12.2 Persistence and degradability**
The substance is inorganic; therefore no biodegradation tests are applicable.
The product dissociates into potassium (K+) and sulfate (SO_4^{2-}) ions, which cannot be further degraded.
· **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).
· **Behaviour in sewage processing plants:**

· Type of test	Effective concentration	Method	Assessment
7778-80-5 potassium sulfate			
EC50	>100 mg/L (activated sludge) NOEC: 100 mg/L		

· **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	
02 01 09	agrochemical waste other than those mentioned in 02 01 08

· **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** Not applicable
· **DOT, ADR, ADN, IMDG, IATA** Void
· **14.3 Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**
· **Class** Void
· **14.4 Packing group** Not applicable
· **DOT, ADR, IMDG, IATA** Void
· **14.5 Environmental hazards:**
· **Marine pollutant:** No

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· **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.
· **UN "Model Regulation":** Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void

· **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) :**
United States (TSCA) : listed
Canada (DSL) : listed
Australia (AICS) : listed
Philippines (PICCS) : listed
Korea (KECI) : listed
China (IECSC) : listed
Japan (ENCS) : listed
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

· **Department issuing SDS:** Regulatory Affairs of ICL Fertilizers Products
· **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
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
NOEC: No Observable Effect Concentration
OECD: Organisation for Economic Co-operation and Development

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· **Sources**
REACH dossier, 2010
REACH CSR, 2010

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