

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product Name Sodium Sulphate

Substance Name Sodium sulphate

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

Industrial Industrial manufacturing. Manufacture of substances. Distribution and storage. Formulations. Use: as a detergent, as an intermediate including transfers and lab activities, in laboratories (small scale), in non-spraying formulations, in spraying formulations, in syntheses as a process chemical (not as a reactant)

Professional Use: as a detergent, in laboratories (small scale), in non-spraying formulations, in spraying formulations

Consumer Use: in cardboard, in consumer products (private household uses)

Uses advised against Not identified.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

ATDM CO.
Tel. 00903125147055
www.atdmco.com

E-mail address Marketing@atdmco.com

1.4. Emergency telephone number

Europe 00903125147055

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

Symbols/Pictograms

Not applicable

Signal word

None

Hazard statements

Not applicable

Precautionary Statements

Not applicable

2.3. Other hazards

None known

This substance does not meet the criteria for classification as PBT or vPvB

This product does not contain any known or suspected endocrine disruptors

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	EC No	REACH registration number	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Sodium sulphate 'CAS #:' 7757-82-6	231-820-9	01-2119519226-43-0010	>99	[A]	No data available	No data available	No data available

*Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes**[A] - Not classified, Data are conclusive but insufficient for classification**Full text of H- and EUH-phrases: see section 16***Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Sodium sulphate 'CAS #:' 7757-82-6	5989	-	-	-	Not applicable

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	First aid measures not required, but get fresh air for personal comfort.
Skin contact	First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.
Eye contact	First aid measures not required, but rinse opened eye under running water for personal comfort to avoid mechanical irritation.
Ingestion	If a large quantity has been ingested or if you feel unwell, get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms None known.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Not combustible. All types of extinguishing media are suitable. Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable extinguishing media Water with full jet as this can form a dust cloud.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Hazardous combustion products Carbon monoxide (CO). Carbon dioxide (CO₂). Sulphur dioxide (SO₂).

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters No special protective equipment required.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions If dusty conditions wear respiratory protective device with dust filter, gloves and protective clothing for hygienic reasons.

6.2. Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Methods for containment Cover to prevent dust formation. Take up mechanically, placing in appropriate containers for disposal.

Methods for cleaning up Vacuum or sweep up material and place in a designated, labelled waste container. After cleaning, flush away traces with water.

6.4. Reference to other sections

Reference to other sections See Section 7, 8, 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Do not inhale dust. Avoid generation of dust. Provide adequate ventilation as well as local exhaust at critical locations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place.

7.3. Specific end use(s)

Risk Management Methods (RMM) This information is supplied in the present Safety Data Sheet.

Section 8 - EU - Great Britain

8.1. Control parameters

Exposure Limits

Keep personal exposure levels below Derived No Effect Level (DNEL) and national exposure limit values (if existing).

Dust; respirable dust, TWA: 4 mg/m³

Dust; inhalable dust, TWA: 10 mg/m³

EH40/2005 Work Exposure Limits, Fourth edition

Derived No Effect Level (DNEL) - worker

Sodium sulphate (7757-82-6)			
Type	Exposure route	DNEL	Remarks
Chronic effects, local	Inhalation	20	mg/m ³
Chronic effects, systemic	Inhalation	20	mg/m ³

Derived No Effect Level (DNEL) - Consumer

Sodium sulphate (7757-82-6)			
Type	Exposure route	DNEL	Remarks
Chronic effects, local	Inhalation	12	mg/m ³
Chronic effects, systemic	Inhalation	12	mg/m ³

Predicted No Effect Concentration (PNEC)

Sodium sulphate (7757-82-6)		
Environmental compartment	Predicted No Effect Concentration (PNEC)	Remarks
Freshwater	11.09	mg/l
Freshwater sediment	40.2	mg/kg dry weight
Marine water	1.109	mg/l
Marine sediment	4.02	mg/kg dry weight
Impact on Sewage Treatment	800	mg/l
Soil	1.54	mg/kg dry weight

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection

Protective gloves not really required. However, we recommend using protective gloves made of rubber. Chloroprene rubber, CR. Nitrile rubber, NBR.

Skin and body protection

Normal work clothes for the chemical industry.

Respiratory protection

Wear respiratory device with dust filter (P3) in case of insufficient ventilation.

Environmental exposure controls Not applicable.

Additional information

Exposure scenarios are not available since not classified as dangerous for health or environment according to CLP Regulation (EC) No 1272/2008.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Powder
Appearance	crystalline
Colour	white
Odour	Odourless
Odour threshold	Not applicable

Property	Values	Remarks • Method
Melting point / freezing point	884-886 °C	
Boiling point / boiling range	> 1700 °C	
Flammability (solid, gas)		Not flammable
Explosive limits		
Upper explosive limits		Not applicable
Lower explosive limits		Not applicable
Flash point		Not applicable
Autoignition temperature	> 400 °C	Regulation (EC) No. 440/2008, Annex, A.16
Decomposition temperature		Not determined
pH	>4	solution (10 %)
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties	Not explosive.	
Oxidising properties	Not oxidising.	
Water solubility	445.5 g/L	@ 20 °C, OECD Test No. 105: Water Solubility
Solubility(ies)		No information available
Partition coefficient	-4.38	log POW (EPI Suite)
Vapour pressure		Not applicable
Vapour density		No information available
Relative density		No information available
Density	2.7 g/cm ³	@ 20 °C
Bulk density	1450 kg/m ³	@ 20 °C
Particle characteristics		No information available

9.2.1. Information with regards to physical hazard classes

Explosives	Not applicable
Flammable gases	Not applicable
Aerosols	Not applicable
Oxidising gases	Not applicable
Gases under pressure	Not applicable
Flammable solids	
Burning Rate	Not flammable
Self-reactive substances and mixtures	Not applicable
Pyrophoric liquids	Not applicable
Pyrophoric solids	Not applicable
Self-heating substances and mixtures	Not applicable
Oxidising liquids	Not applicable
Oxidising solids	Not applicable
Oxidising properties	
Organic peroxides	Not applicable
Desensitised explosives	Not applicable

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

There exists no specific test data for this product. For further information, see the subsequent subsections of this chapter.

10.2. Chemical stability

Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Contact of melted Sodium sulphate (melting point 884°C) with aluminium will cause violent reactions (formation of Al₂O₃, Na₂O and SO₂/SO₃-gas). Danger of explosion!.

10.4. Conditions to avoid

Conditions to avoid

Avoid contact with water or humidity. The product is. Hygroscopic.

10.5. Incompatible materials

Incompatible materials

See above.

10.6. Hazardous decomposition products

Hazardous decomposition products

Thermal decomposition can lead to release of toxic/corrosive gases and vapours; Sulphur dioxide (SO₂), Carbon monoxide (CO), Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Inhalation. Dermal.

Symptoms related to the physical, chemical and toxicological characteristics

Most important symptoms and effects, both acute and delayed

None known.

Numerical measures of toxicity

Acute toxicity

Product does not present an acute toxicity hazard based on known or supplied information.

Sodium sulphate (7757-82-6)				
Method	Species	Exposure route	Effective dose	Remarks
Unknown	Mouse	Oral	5989	LD50 (lethal dose) mg/kg
OECD Test No. 423: Acute Oral toxicity - Acute Toxic Class Method	Rat	Oral	>2000	LD50 (lethal dose) mg/kg
OECD Test No. 436	Rat	Inhalation	>2.4	LC50 /4h, dust mg/l Maximum attainable concentration

Skin corrosion/irritation

Non-irritating to the skin.

Sodium sulphate (7757-82-6)			
Method	Species	Exposure route	Results:
OECD Test No. 404: Acute Dermal Irritation/Corrosion	rabbit	Dermal	Non-irritating to the skin

Serious eye damage/eye irritation Slightly irritating but not relevant for classification.

Sodium sulphate (7757-82-6)			
Method	Species	Exposure route	Results:
Regulation (EC) No. 440/2008, Annex, B.5	Rabbit	Eye	Slightly irritating. No classification according to GHS criteria.

Respiratory or skin sensitisation Not a skin sensitiser.

Sodium sulphate (7757-82-6)			
Method	Species	Exposure route	Results:
OECD Test No. 406: Skin Sensitisation	Guinea pig	Skin	Not sensitising.

Germ cell mutagenicity Not mutagenic.

Sodium sulphate (7757-82-6)		
Method	Species	Results:
Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test)	in vitro	Negative
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Negative
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro	Negative

Carcinogenicity There is no indication for any carcinogenic potential since all in vitro mutagenicity studies are negative.

Reproductive toxicity Is not considered hazardous to the reproduction.

Sodium sulphate (7757-82-6)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	Rat	Oral	1000	P0; NOAEL mg/kg bw/d No impairment of fertility has been observed.
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	Rat	Oral	1000	F1; NOAEL mg/kg bw/d No embryotoxic or teratogenic effects have been observed.
Test type Developmental Toxicity	Mouse	Oral	2800	NOAEL mg/kg bw/d no maternal toxicity
Test type Developmental Toxicity	Mouse	Oral	2800	NOAEL mg/kg bw/d No embryotoxic or teratogenic effects have been observed.

STOT - single exposure No known effect

STOT - repeated exposure

Sodium sulphate (7757-82-6)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	Rat	Oral	1000	NOAEL mg/kg bw/d No toxicity
One-Generation Reproduction Toxicity Study	Pig	Oral	3320	P0, F1; NOAEL, mg/kg bw/d

Aspiration hazard No hazard from product as supplied.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Low toxicity to aquatic organisms.

Sodium sulphate (7757-82-6)					
Method	Species	Exposure route	Effective dose	Exposure time	Remarks
EPA/600/4-90/027	Pimephales promelas	Freshwater	7960	96h	LC50 (lethal concentration) mg/l
EPA 600/R-94/024	Daphnia magna	Freshwater	1766	48h	EC50 (effective concentration) mg/l
Not defined	Nitzschia sp. (F110)	Freshwater	1900	120h	EC50 (effective concentration) mg/l
Test type Activated sludge	Bacteria toxicity	Freshwater	26	37d	NOEC g/l

12.2. Persistence and degradability

Does not biodegrade, inorganic substance.

12.3. Bioaccumulative potential

No bioaccumulation potential.

Chemical name	Partition coefficient	Bioconcentration factor (BCF)
Sodium sulphate	-4.38	0.5

12.4. Mobility in soil

The substance is not expected to adsorb to a high degree to suspended solids and sediment based upon the log Pow.

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	The product is not classified as hazardous waste. Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Not applicable.
Waste codes / waste designations according to EWC / AVV	Waste from residues/unused products; 16 03 06.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

ADR Road transport

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
Subsidiary class	-
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

RID Rail transport

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
Subsidiary hazard class	-
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

IMDG Sea transport

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special precautions for user	None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

IATA Air transport

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

SECTION 15: Regulatory information

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

International Regulations

Not applicable.

National regulations

France

Occupational Illnesses (R-463-3, France)

Not applicable

Germany

Water hazard class (WGK)

slightly hazardous to water (WGK 1)

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

REACH: Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

CLP: The Classification, Labelling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)

SVHC: Substances of Very High Concern for Authorisation:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

ED: Endocrine disrupting potential

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End of Safety Data Sheet

EGHS - BE