SAFETY DATA SHEET

GRANULAR SULPHUR (ELEMENTAL SULPHUR)

Prepared with reference to Regulation (EC) No 1907/2006 (REACH) Annex II as amended, Regulation (EC) No 1272/2008 (CLP) and the UN Globally Harmonized System (GHS) — 16-section format

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Supersedes	—
Related Document	Technical Data Sheet ATB-TDS-SUL-2026-001

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Product name	Granular Sulphur (Elemental Sulphur, formed / granulated)
Chemical name	Sulphur
Molecular formula	S (S_8)
CAS No.	7704-34-9
EC No.	231-722-6
EU Index No.	016-094-00-1
REACH Registration No.	Not claimed by ATABAŞ GLOBAL. Registration status of the manufacturing producer, where available, is provided on request.

1.2 Relevant identified uses and uses advised against

Identified uses	Industrial raw material: sulphuric acid manufacture; fertilizer production; rubber vulcanisation; hydrometallurgy; chemical intermediate; agricultural use
Uses advised against	None known, other than uses contrary to this SDS

1.3 Details of the supplier of the safety data sheet

Company	ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ
Address	Huzur Mah. Azerbaycan Cad., Skyland İstanbul 4 B Ofis Bloğu, 27. Kat, No: 389-390-391, İstanbul, Türkiye
Telephone	+90 212 801 64 60
E-mail (competent person)	ceo@atabas.com.tr
Website	www.atabas.com.tr

1.4 Emergency telephone number

Türkiye — Poison Information Centre (UZEM)	114 (24 h)
Company emergency contact	+90 212 801 64 60 (office hours)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

Classification (CLP / GHS)	Skin Irritation, Category 2 — H315: Causes skin irritation
Other hazards	Combustible solid. Dust may form explosive mixtures with air. Burning sulphur produces toxic sulphur dioxide (SO_2) gas.

2.2 Label elements

Hazard pictogram	GHS07 (exclamation mark)
Signal word	WARNING
Hazard statement	H315 — Causes skin irritation
Precautionary statements	P264 — Wash hands and exposed skin thoroughly after handling. P280 — Wear protective gloves / protective clothing / eye protection. P302+P352 — IF ON SKIN: Wash with plenty of water. P332+P313 — If skin irritation occurs: Get medical advice/attention. P362+P364 — Take off contaminated clothing and wash it before reuse.
Supplementary information	EUH-statements: none. Keep away from heat, sparks, open flames and oxidising agents.

2.3 Other hazards

Sulphur does not meet the PBT/vPvB criteria of REACH Annex XIII. Finely divided sulphur dust is readily ignitable and can propagate deflagration; static discharge can be an ignition source. Molten sulphur (not the form supplied) releases hydrogen sulphide (H_2S) and causes thermal burns. Combustion generates sulphur dioxide, which is toxic and corrosive to the respiratory tract.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	EC No.	Concentration (% wt)	Classification (CLP)
Sulphur	7704-34-9	231-722-6	≥ 99.8 (typical 99.9)	Skin Irrit. 2, H315
Ash (inorganic residue)	—	—	≤ 0.03	Not classified
Moisture (water)	7732-18-5	231-791-2	≤ 2.0	Not classified

Concentration limits per ITS Caleb Brett Deniz Survey A.Ş. (Intertek), İskenderun Laboratory — Analytical Report No. 38042-26, Sample ID ISK06618-26, Order No. ISK06542-26, Analysis Date 21 July 2026. Trace constituents (acidity ≤ 0.23 %, Fe ≤ 30 ppm, NaCl ≤ 82.5 ppm) are below any classification threshold.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General	Remove affected person from exposure. Show this SDS to the attending physician.
Inhalation (dust)	Move to fresh air. If breathing is difficult, give oxygen by trained personnel. Seek medical attention if symptoms persist. For exposure to SO_2 from burning sulphur: move to fresh air immediately and seek urgent medical attention.
Skin contact	Remove contaminated clothing. Wash skin with plenty of soap and water. Get medical advice if irritation develops or persists.
Eye contact	Rinse cautiously with water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting. Give water to drink if the person is conscious. Seek medical advice if a large amount has been swallowed.

4.2 Most important symptoms and effects, acute and delayed

Dust may cause mechanical irritation of the eyes, skin and respiratory tract; repeated skin contact may cause dermatitis. Ingestion of large quantities may cause gastrointestinal upset (nausea, diarrhoea). Inhalation of SO_2 from combustion causes coughing, chest tightness, bronchospasm and, at high concentrations, pulmonary oedema.

4.3 Indication of immediate medical attention and special treatment

Treat symptomatically. Persons exposed to combustion gases should be kept under medical observation for delayed respiratory effects.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray or fog, foam, dry chemical powder, sand or earth. Water spray is preferred for sulphur fires as it cools the mass below the ignition temperature.
Unsuitable extinguishing media	Solid water jet directed at loose sulphur (disperses dust and may spread burning material). Do not use carbon dioxide on large sulphur fires — ineffective.
Special hazards	Combustible solid; burns with a pale blue flame that is difficult to see in daylight. Dust–air mixtures are explosive (minimum explosible concentration approx. 35 g/m³). Combustion produces sulphur dioxide (SO_2), a toxic and corrosive gas. Contact with oxidisers may cause violent reaction or explosion.
Advice for fire-fighters	Wear self-contained breathing apparatus (SCBA) and full protective clothing. Cool fire-exposed piles and containers with water spray. Contain fire-fighting water; approach from upwind. Avoid raising dust.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Eliminate all ignition sources; use spark-proof tools and explosion-protected equipment. Avoid dust formation. Wear PPE as in Section 8; use respiratory protection if dust is generated.
Environmental precautions	Prevent entry into drains, surface water and soil. Sulphur is practically insoluble but may acidify water and soil on oxidation.
Methods for containment and clean-up	Sweep or shovel up gently, dampening with water to suppress dust, or use an explosion-proof vacuum. Place in suitable, labelled containers for recovery or disposal. Avoid dry sweeping with metal tools that may spark.
Reference to other sections	See Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- Keep away from heat, sparks, open flames and hot surfaces. No smoking. Take precautionary measures against static discharge; bond and earth conveying equipment, chutes and hoppers.
- Minimise dust generation during loading, transfer and grab handling; use enclosed conveyors and dust extraction where practicable. Dust deposits on hot surfaces and equipment must be removed regularly.
- Avoid contact with skin and eyes. Do not eat, drink or smoke when handling. Wash hands after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a cool, dry, well-ventilated area on impermeable ground, away from oxidising agents, chlorates, nitrates, peroxides, halogens, finely divided metals, ammonia and strong bases.
- Bulk stockpiles: control dust, keep away from ignition sources, cover where practicable. Moist sulphur is corrosive to mild steel; protect structural steel in contact with wet product.
- Ship's holds and warehouses should be cleaned and, where required, lime-washed prior to loading bulk sulphur (refer to IMSBC Code, Schedule for SULPHUR).

7.3 Specific end use(s)

See Section 1.2.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Substance	Reference	Limit value
Sulphur dust (as particulates not otherwise regulated / nuisance dust)	ACGIH TLV (PNOR) — guidance	10 mg/m³ inhalable; 3 mg/m³ respirable (8 h TWA)

Sulphur dust	UK EH40 WEL (dust, general)	10 mg/m³ inhalable; 4 mg/m³ respirable (8 h TWA)
Sulphur dioxide (combustion product)	EU IOELV (Directive 2017/164)	0.5 ppm (1.3 mg/m³) 8 h TWA; 1 ppm (2.7 mg/m³) STEL
DNEL / PNEC	—	No specific DNEL/PNEC values asserted by ATABAŞ GLOBAL; producer registration dossier values, where available, apply

8.2 Exposure controls

Engineering controls	Local exhaust ventilation and dust suppression at transfer points. Explosion-protected electrical equipment in dusty areas. Provide eyewash stations and safety showers.
Eye / face protection	Safety glasses with side shields or dust goggles (EN 166).
Skin / hand protection	Protective gloves (nitrile or leather, EN 388/EN 374); long-sleeved work clothing. Wash contaminated clothing before reuse.
Respiratory protection	Particulate respirator FFP2/FFP3 (EN 149) where dust exceeds limits or ventilation is inadequate. For fire or SO_2 exposure: SCBA.
Environmental exposure controls	Prevent release to drains and watercourses; contain spillages.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Physical state / form	Solid — dry granules / pastilles
Colour	Bright yellow
Odour	Odourless to faint characteristic odour
Odour threshold	Not applicable
pH	Not applicable (insoluble); aqueous slurry mildly acidic
Melting point / freezing point	approx. 112.8 °C (rhombic) – 119.6 °C (monoclinic)
Boiling point	approx. 444.6 °C
Flash point	approx. 168 °C (closed cup)
Evaporation rate	Not applicable
Flammability (solid)	Combustible solid (Flammable solid, transport Class 4.1)
Explosive limits (dust)	Lower explosion limit approx. 35 g/m³ in air
Vapour pressure	< 0.001 hPa at 20 °C (negligible)
Vapour density	Not applicable
Relative density	2.07 (rhombic) at 20 °C
Bulk density	approx. 1.1–1.3 t/m³ (granular)
Solubility in water	Practically insoluble
Solubility (other)	Soluble in carbon disulphide; slightly soluble in benzene, toluene
Partition coefficient (log Kow)	Not applicable (inorganic)
Auto-ignition temperature	approx. 232 °C (solid); dust cloud approx. 190 °C
Decomposition temperature	Not applicable
Viscosity	Not applicable (solid)
Explosive properties	Not explosive as a solid mass; dust–air mixtures are explosible
Oxidising properties	None
Purity (typical)	99.90 % S; ash < 0.010 %; acidity 0.060 %; moisture 0.300 %; Fe 1.51 ppm; NaCl < 10 ppm (per referenced analytical report)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Reacts violently with strong oxidising agents. Reacts with finely divided metals (e.g. zinc, aluminium powder) with heat generation.
Chemical stability	Stable under normal ambient storage and handling conditions.
Possibility of hazardous reactions	Dust explosion in the presence of an ignition source. Violent reaction with chlorates, nitrates, perchlorates, peroxides, halogens, liquid oxygen, ammonia and strong bases.
Conditions to avoid	Heat, sparks, open flames, static discharge, dust accumulation, moisture (corrosion of steel).
Incompatible materials	Oxidising agents, halogens, alkali metals, ammonia, chlorates, nitrates, finely divided metals, strong bases.
Hazardous decomposition products	Sulphur dioxide (SO_2) and, in oxygen-deficient combustion or from molten sulphur, hydrogen sulphide (H_2S).

SECTION 11. TOXICOLOGICAL INFORMATION

Endpoint	Result / Information
Acute toxicity — oral	LD50 (rat) > 2,000 mg/kg bw — not classified
Acute toxicity — dermal	LD50 (rabbit) > 2,000 mg/kg bw — not classified
Acute toxicity — inhalation	LC50 (rat, 4 h) > 5.43 mg/L (dust) — not classified
Skin corrosion / irritation	Irritating to skin (Category 2, H315)
Serious eye damage / irritation	Mechanical irritation from dust; not classified
Respiratory / skin sensitisation	Not a sensitiser
Germ cell mutagenicity	Negative in available in-vitro and in-vivo studies
Carcinogenicity	Not classified; not listed by IARC, NTP or OSHA
Reproductive toxicity	No adverse effects reported
STOT — single / repeated exposure	Not classified. Dust may irritate the respiratory tract; repeated contact may cause dermatitis.
Aspiration hazard	Not applicable (solid)
Combustion product — SO_2	Highly irritating and toxic on inhalation; may cause pulmonary oedema at high concentrations

SECTION 12. ECOLOGICAL INFORMATION

Endpoint	Result / Information
Acute aquatic toxicity — fish	LC50 (96 h) > 100 mg/L (practically non-toxic; limited by insolubility)
Acute aquatic toxicity — invertebrates	EC50 Daphnia magna (48 h) > 100 mg/L
Acute aquatic toxicity — algae	ErC50 (72 h) > 100 mg/L
Persistence and degradability	Inorganic element; not biodegradable in the classical sense. Slowly oxidised by soil bacteria to sulphate, which may lower soil/water pH.
Bioaccumulative potential	Not expected to bioaccumulate
Mobility in soil	Low — insoluble solid; oxidation products (sulphate) are mobile
PBT / vPvB assessment	Not PBT / vPvB
Other adverse effects	Large spillages may acidify soil or water bodies. Not classified as marine pollutant for transport.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods	Recover and recycle uncontaminated product wherever possible. Otherwise dispose via a licensed waste contractor in accordance with national and local regulations (EU: Waste Framework Directive 2008/98/EC; Türkiye: Atık Yönetimi Yönetmeliği). Do not incinerate in open air (SO_2 emission).
Packaging	Empty big bags / sacks may retain dust; decontaminate or dispose of as product. Do not reuse for food or feed.
EWC code (indicative)	06 06 99 — wastes from the MFSU of sulphur chemicals, not otherwise specified (to be confirmed by the waste holder)

SECTION 14. TRANSPORT INFORMATION

Item	ADR / RID (road / rail)	IMDG (sea)	IATA (air)
14.1 UN number	UN 1350	UN 1350	UN 1350
14.2 UN proper shipping name	SULPHUR	SULPHUR	SULPHUR
14.3 Transport hazard class	4.1	4.1	4.1
14.4 Packing group	III	III	III
14.5 Environmental hazards	No	Not a marine pollutant	No
Labels	4.1	4.1 — EmS F-A, S-G; stowage Category A	4.1
Special provisions	SP 242: sulphur is not subject to ADR/RID when transported in quantities of less than 400 kg per package or when formed to a specific shape (e.g. prills, granules, pellets, pastilles or flakes) — applicability to be confirmed per consignment	Bulk carriage under IMSBC Code, schedule SULPHUR (solid, formed) — Group C, MHB where applicable	Limited quantity 5 kg; cargo aircraft 100 kg (PI 449 / 466)
14.6 Special precautions for user	Keep dry; avoid ignition sources during loading/unloading; earth conveyors. Hold/wagon cleaning and lime-wash as per IMSBC Code / carrier requirements. Segregate from oxidisers.		
14.7 Bulk transport (MARPOL Annex V / IMSBC)	Solid bulk cargo — carried under IMSBC Code entry SULPHUR. Not subject to MARPOL Annex II / IBC Code.		

SECTION 15. REGULATORY INFORMATION

EU	Regulation (EC) No 1272/2008 (CLP): Index No. 016-094-00-1, Skin Irrit. 2, H315. Regulation (EC) No 1907/2006 (REACH): substance registered by manufacturers/importers; ATABAŞ GLOBAL does not hold or claim a REACH registration for this product. Not listed in Annex XIV (authorisation) or Annex XVII (restriction). Seveso III (2012/18/EU): not a named substance.
Türkiye	Maddelerin ve Karışımların Sınıflandırılması, Etiketlenmesi ve Ambalajlanması Hakkında Yönetmelik (SEA, 11.12.2013) and Kimyasalların Kaydı, Değerlendirilmesi, İzni ve Kısıtlanması Hakkında Yönetmelik (KKDİK, 23.06.2017) — classification as above.
USA	TSCA inventory: listed. OSHA HCS 2012: Skin Irrit. 2. SARA 313: not listed.
Other inventories	Listed on major inventories (EINECS/ELINCS, DSL, AICS, IECSC, ENCS, KECI, PICCS, NZIoC).
Chemical safety assessment	No chemical safety assessment has been carried out by ATABAŞ GLOBAL.

SECTION 16. OTHER INFORMATION

Full text of H-statements (Sections 2–3)	H315 — Causes skin irritation
Abbreviations	CLP: Classification, Labelling and Packaging; GHS: Globally Harmonized System; PBT/vPvB: Persistent, Bioaccumulative, Toxic / very Persistent, very Bioaccumulative; TWA: Time-Weighted Average; STEL: Short-Term Exposure Limit; WEL: Workplace Exposure Limit; IMSBC: International Maritime Solid Bulk Cargoes Code; EmS: Emergency Schedule; SCBA: Self-Contained Breathing Apparatus; LD50/LC50: median lethal dose/concentration.
Data sources	Independent laboratory analysis — ITS Caleb Brett Deniz Survey A.Ş. (Intertek), İskenderun Laboratory — Analytical Report No. 38042-26, Sample ID ISK06618-26, Order No. ISK06542-26, Analysis Date 21 July 2026; ECHA C&L Inventory and harmonised classification for sulphur (EC 231-722-6); publicly available producer SDS data for elemental sulphur; ADR 2025, IMDG Code Amdt 42-24, IMSBC Code, IATA DGR.
Training advice	Personnel handling bulk sulphur should be trained in dust-explosion prevention, use of PPE and emergency response to sulphur fires.
Revision history	Rev. 00 — 28 August 2026 — first issue.

SANCTIONS AND TRADE COMPLIANCE

ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ conducts its business in full compliance with the economic and trade sanctions regimes administered by the United States (OFAC), the European Union, the United Kingdom (OFSI) and the United Nations Security Council. ATABAŞ does not work with sanctioned countries, sanctioned companies, sanctioned individuals or sanctioned vessels, and does not supply, source, finance or transport goods in breach of these regimes. All counterparties are subject to Know-Your-Customer and sanctions screening before contract signature and throughout performance.

Disclaimer: This Safety Data Sheet has been prepared by ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ in good faith, with reference to the independent laboratory report cited above and to generally available information on elemental sulphur. It is intended as a guide to safe handling, use, storage and transport and does not constitute a specification or a warranty of product properties. Producer certifications and regulatory registrations are asserted only where verified by ATABAŞ GLOBAL; other values are given as generally applicable data for elemental sulphur. Users are responsible for determining the suitability of the product for their intended use and for compliance with all applicable regulations. Contractual quality is defined solely by the Sales Contract and the producer's Certificate of Quality.

Issued by	Position	Date	Signature / Stamp
ATABAŞ GLOBAL DIŞ TİCARET ANONİM ŞİRKETİ	HSE & Quality Department	28 August 2026	