

This Safety Data Sheet is in accordance with Regulation (EC) No 1907/2006 (REACH).

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Material Name : Molten Sulphur
CAS No : 7704-34-9
EC No : 231-722-6
Other names : Liquid Kükürt

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

Industrial use.

Details of the supplier of the substance or mixture

Manufacturer/Supplier : Tüpraş

Adress : Türkiye Petrol Rafinerileri A.Ş. Genel Müdürlüğü KÖRFEZ/
KOCAELİ

Telephone : +90 262 316 30 00

Fax : +90 262 316 30 10-11

e-mail : selcen.temeltopallar@tupras.com.tr
yasin.ersoz@tupras.com.tr

1.3 Emergency Telephone Number

Company Telephone : +90 262 316 30 00

2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable solid, Liquid Cat 1,2	H228
Skin Irritation Cat. 2	H315

Label Elements

Labelling according to Regulation (EC) No 1272/2008.

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Symbols

:

GHS02

GHS07

Signal Word

: Warning

Hazard statements

Physical Hazards

: **H228** Flammable solid.

Health hazards

: **H315** Causes skin irritation.

Precautionary statements:

Prevention

: **P210** Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection

Response

: **P302+P352** IF ON SKIN: Wash with plenty of soap and water.

P321 Specific treatment (see First Aid Measures on Safety Data Sheet).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

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Disposal : **P501** Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations

2.3 Other hazards

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

CAS NO	EINECS NO	Chemical Composition	% Conc.	Risk Phrases (Regulation (EC) No 1272/2008)
7704-34-9	231-722-6	Sulphur	99-100	Flammable solid, 2 H228 Skin Irritation, 2 H315
7783-06-4	231-977-3	Hydrogen Sulfide	0-1	Flam. Gas 1, H220 Press. Gas, H280 Acute Tox. 2, H330 STOT SE 3, H335 Aquatic Acute 1, H400

3.2 Mixtures

Not applicable.

4. FIRST-AID MEASURES

4.1 Description of First Aid Measures

Inhalation: If inhalation of mists, fumes or vapour causes irritation to the nose or throat, or coughing, remove to fresh air. If symptoms persist obtain medical advice.

Skin Contact: Remove heavily contaminated clothing and wash underlying skin. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If skin irritation occurs: Get medical advice/attention.

Eye Contact: Flush eyes with water while holding eyelids open. If redness, burning, blurred vision, or swelling persist transport to the nearest medical facility for additional treatment.

Ingestion: If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If contamination of the mouth occurs, wash out thoroughly with water.

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4.2 Most important symptoms/effects, acute & delayed

Inhalation: Warning: Irritating and toxic hydrogen sulfide gas may be present. If inhalation of H₂S causes irritation to the nose or throat, or coughing, remove to fresh air. If symptoms persist obtain medical advice.

Skin Contact: Causes skin irritation. Hot product (liquid) can cause thermal burns.

Eye contact: Eye irritation signs and symptoms may include a burning sensation and a temporary redness of the eye. Hot product can cause thermal burns.

Ingestion: Swallowing can cause lung damage. May cause nausea, vomiting, and diarrhea. Ingestion is likely to be harmful or have adverse effects.

4.3 Indication of immediate medical attention and special treatment needed

There is no specific antidote or treatment. It should be treated symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Foam, water spray or fog may be used. DO NOT USE water jets.

5.2 Special hazards arising from substance or mixture

Combustible. It can burn at high temperatures. Combustion results toxic gases. Hydrogen Sulfide, Sulphur oxides, nitrogen oxides. Carbon oxides. Vapours are heavier than air and may spread along floors.

5.3 Advice for fire-fighters

Ensure an escape path is always available from any fire. Special protective equipment for firefighters. In case of fire: Wear self-contained breathing apparatus. Use water spray or fog for cooling exposed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing, gloves and eye/face protection. Ventilate contaminated area. Do not breathe fumes, vapour. Do not operate electrical equipment. Remove all possible sources of ignition in the surrounding area. Take precautionary measures against static discharge. In case of fire: Wear self-contained breathing apparatus. Emergency cooling must be provided. Remove product from area of fire.

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6.2 Environmental precautions

Stop leak if safe to do so. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3 Methods and material for containment and cleaning up

Vapour is heavier than air and may travel to remote sources of ignition (eg. Along drainage systems, in basements etc.). Isolate spillage from all ignition sources.

If spillage has occurred in a confined space, ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry. Ensure good ventilation. Wear protective clothing. Collect in closed and suitable containers for disposal. Do not wash product into drainage system.

6.4 Reference to other sections

Refer to sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

If vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level. Hydrogen sulfide gas may be present. Avoid contact with skin, eyes and clothing. Keep away from food, drink and animal feedingstuffs. Take precautionary measures against static discharges. Ensure equipment is adequately earthed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not allow to enter into surface water or drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Flammable. It can burn at high temperatures. Store and use only in well ventilated areas away from heat and sources of ignition. Store and use only equipment/containers designed for use with this product. Containers must be properly labelled and kept closed when not in use.

7.3 Specific end use

No data available.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters The following limits are recommended.

Material	Exposure Limits
Sulphur (CAS 7704-34-9)	Non established.
Hydrogen sulfide (CAS 7783-06-4)	ACGIH TLV/TWA : 10 ppm (8 h) ACGIH TLV/STEL: 15 ppm (15 min)

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Use only outdoors or in a well-ventilated area. Take precautionary measures against static discharges.

8.2.2 Personal protective precautions

Eyes: Wear chemically resistant gloves. Use suitable face protection.

Skin: Wear full chemical protective and sealed clothes.

Inhalation: In case of insufficient ventilation, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

	Test Unit	Guarantee	Test Method
Appearance		Yellow, solid	Visual inspection
Odour		Characteristic	
Melting point/ Freezing point	°C	119	ASTM D97
Initial boiling point	°C	445	ASTM D 86
Flash point temperature	°C	206	ASTM D 92
Relative density (at 15 °C)	kg/l	2.1	ASTM D 1298

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9.2 Other Information

No relevant additional information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of Hazardous Reactions

Hydrogen sulfide may be formed at high temperatures. Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Keep away from heat, sparks, open flames and other ignition source.

10.5 Incompatible materials

Strong oxidising agents, acids, bases, strong bases.

10.6 Hazardous decomposition products

SO_x, Hydrogen sulfide (H₂S).

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity	: Not classified.
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/eye irritation	: Not classified.
Respiratory or skin sensitisation	: Not classified.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.

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Other information

: May cause eye irritation, respiratory irritation and gastrointestinal irritation.

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Not hazardous.

12.2 Persistence and degradability

Persistence and degradability.

12.3 Bioaccumulative potential

Contains constituents with low potential to bio accumulate.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Material Disposal:**

Handle with care.

Dispose of waste product under conditions approved by the local authority or via a licensed waste disposal contractor.

Container Disposal:

Never use pressure to empty container. Do not burn or use a cutting torch on the empty drum. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.

Local Legislation:

Ministry of Environment and Urbanism "Regulation on Control of Waste"

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14. TRANSPORT INFORMATION

ADR/RID

- 14.1 UN Number : 2448
14.2 UN proper shipping name : SULPHUR, MOLTEN
14.3 Transport hazard class(es) : 4.1
14.4 Packing group : III
14.5 Environmental hazards : No
14.6 Special precautions for user : Refer to Chapter 7

Inland waterways transport (ADN):

- 14.1 UN Number : 2448
14.2 UN proper shipping name : SULPHUR, MOLTEN
14.3 Transport hazard class(es) : 4.1
14.4 Packing group : III
14.5 Environmental hazards : No
14.6 Special precautions for user : Refer to Chapter 7

Sea transport (IMDG Code):

- 14.1 UN Number : 2448
14.2 UN proper shipping name : SULPHUR, MOLTEN
14.3 Transport hazard class(es) : 4.1
14.4 Packing group : III
14.5 Marine pollutant : No
14.6 Special precautions for user : Refer to Chapter 7

Air transport (IATA):

- 14.1 UN Number : 2448
14.2 UN proper shipping name : SULPHUR, MOLTEN
14.3 Transport hazard class(es) : 4.1
14.4 Packing group : Not applicable

This Safety Data Sheet is in accordance with Regulation (EC) No 1907/2006 (REACH).

14.5 Environmental hazards : Not applicable

14.6 Special precautions for user : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data.

15. REGULATORY INFORMATION

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

The contents and format of this SDS are in accordance with EEC Commission Directive 1272/2008/EC (CLP) and EEC Commission Regulation 1907/2006/EC (REACH).

15.2 National Regulations

This Safety Data Sheet is accordance with "Regulation on Safety Data Sheets regarding the Hazardous Substances and Mixtures" published on 13 December 2014 on the official Gazette with No:29204.

16. OTHER INFORMATION

16.1 Other Information

The information presented about health, safety and environment issues in this safety data sheet was given by considering of best knowledge and reliable sources at the date of its preparation. Although maximum effort was shown, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission, recommendation or authorization given or implied to practise any patented invention without a valid licence. The TÜPRAŞ shall not be responsible for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.

Abbreviations :

REACH : European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

This Safety Data Sheet is in accordance with Regulation (EC) No 1907/2006 (REACH).

- RID : Regulations Concerning the International Transport of Dangerous Goods by Rail
IMDG : International Maritime Code for Dangerous Goods
IMO : International Maritime Organization
ICAO : International Civil Aviation Organization
IATA : International Air Transport Association
CLP : Classification, Labelling and Packaging Regulation according to 1272/2008/EC
IMDG : International Maritime Dangerous Goods
IATA : International Air Transport Association

16.2 Related Person

Competent Person Accreditation no: TSE GBF-A-0-2828