SAFETY DATA SHEET

EM-7210 SPENT

ExxonMobil

Section 1. Identification

Product name : EM-7210 SPENT
see Section 16 for Synonyms

Regulatory reference : Not available.

Product description : spent catalyst

Identification data of the safety data sheet

OKPD 2 : Not available.

TN VED : Not available.

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

Identified uses : Recovery/byproduct

Uses advised against : This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.

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Section 2. Hazards identification

Classification of the substance or mixture according to GOST 32419-2022 and GOST 32423/24/25-2013

Classification of the substance or mixture : PYROPHORIC CHEMICALS - Pyrophoric solids

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H250 - Catches fire spontaneously if exposed to air.

Precautionary statements

Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P222 - Do not allow contact with air.
P233 - Keep container tightly closed.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Response : P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages.
P370 + P378 - In case of fire: Use dry chemical, vermiculite, dry sand, soda ash or lime to extinguish.

Contains : aluminum oxide, non fibrous and thermocracked coke

Section 2. Hazards identification

Other hazards which do not result in classification : May form explosible dust-air mixture if small particles are generated during further processing, handling, or by other means.

Nota : This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

General description of the composition/Method of production : Not available.

Ingredient name	%	Identifiers	Exposure limits	Type
aluminum oxide, non fibrous	≥75 - ≤90	CAS: 1344-28-1 EC: 215-691-6	**Ministry of Health and Social Development MAC (Russian Federation, 3/2023)** TWA 8 hours: 6 mg/m³. Form: Aerosol. **ACGIH TLV (United States, 1/2024) [Aluminum, metal and insoluble compounds]** TWA 8 hours: 1 mg/m³. Form: Respirable fraction.	[1]
thermocracked coke	≥10 - ≤25	CAS: 64741-79-3 EC: 265-080-3	**ExxonMobil (COMPANY)** TWA 8 hours: 0.05 mg/m³ (as V2O5). TWA 8 hours: 3 mg/m³. Form: Respirable fraction..	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

[1] Substance with a workplace exposure limit

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact : Remove contaminated clothing. Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. For those providing assistance, avoid further skin contact to yourself or others. Wear impervious gloves. Launder contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered. Get medical attention if symptoms occur. Immerse in cool water or wrap in wet bandages. Brush off loose particles from skin.

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First-aid measures

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

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

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

General characteristics of fire and explosion hazards : Catches fire spontaneously if exposed to air.

Indicators of fire and explosion hazard of chemical products

Flash point : Closed cup: <37.778°C (<100°F)

Extinguishing media

Suitable extinguishing media : Dry Chemical, Vermiculite, Dry Sand, Soda Ash or Lime

Unsuitable extinguishing media : Water, carbon dioxide (CO_2) or foam

Specific hazards arising from the chemical : Pyrophoric Runoff to sewer may create fire or explosion hazard. Catches fire spontaneously if exposed to air. May re-ignite itself after fire is extinguished.

Hazardous combustion products : Incomplete combustion products, Metal Oxides, Oxides of carbon, Smoke, Fume, sulfur oxides

Special protective actions for fire-fighters : Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Assure an extended cooling down period to prevent re-ignition. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. 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.

Section 6. Accidental release measures

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialised 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".

Environmental precautions : Avoid dispersal of spilt 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).

Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Material will sink. Seek advice of a specialist No immediate action required. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. This product should be handled using appropriate techniques that avoid exposure to atmospheric oxygen and moisture. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. 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.

Static Accumulator : This material is a static accumulator.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. 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. Keep under an inert atmosphere. Eliminate all ignition sources. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
aluminum oxide, non fibrous	**Ministry of Health and Social Development MAC (Russian Federation, 3/2023)** TWA 8 hours: 6 mg/m³. Form: Aerosol. **ACGIH TLV (United States, 1/2024) [Aluminum, metal and insoluble compounds]** TWA 8 hours: 1 mg/m³. Form: Respirable fraction.
thermocracked coke	**ExxonMobil (COMPANY)** TWA 8 hours: 0.05 mg/m³ (as V2O5). TWA 8 hours: 3 mg/m³. Form: Respirable fraction..

For dusty conditions, ACGIH recommends for insoluble and poorly soluble particles not otherwise specified an 8-hour TWA of 10 mg/m3 (inhalable particles), 3 mg/m3 (respirable particles).

Appropriate engineering controls : Engineering controls may be required to control the primary or secondary risks associated with this product. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

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.

Individual protection measures

Hygiene measures : 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid. [pellet]

Colour : Black

Odour : Mild Petroleum/Solvent

Odour threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Closed cup: <37.778°C (<100°F)

Evaporation rate : Not available.

Flammability : Ignitable

Lower and upper explosion limit/flammability limit : Not applicable.

Vapour pressure : Not applicable.

Relative vapour density : Not applicable.

Relative density : 1.5

Solubility in water : Negligible

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Viscosity : Not applicable.

Particle characteristics

Median particle size : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions may include the following:
contact with air
Reactions may include the following:
spontaneous flammability

Conditions to avoid : Do not allow contact with air. High energy sources of ignition., High dust concentrations., Air.

Incompatible materials : Reactive or incompatible with the following materials:,air,Strong oxidisers, Strong Acids, Strong Bases

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Conclusion/Summary

Inhalation : Minimally Toxic. No end point data for material. Based on assessment of the components.

Dermal : Minimally Toxic. No end point data for material. Based on assessment of the components.

Oral : Minimally Toxic. No end point data for material. Based on assessment of the components.

Irritation/Corrosion

Conclusion/Summary

Skin : Negligible irritation to skin at ambient temperatures. No end point data for material. Based on assessment of the components.

Eyes : May cause mild, short-lasting discomfort to eyes. No end point data for material. Based on assessment of the components.

Respiratory : Negligible hazard at ambient/normal handling temperatures. No end point data for material.

Respiratory or skin sensitization

Conclusion/Summary

Skin : Not expected to be a skin sensitizer. No end point data for material. Based on assessment of the components.

Respiratory : Not expected to be a respiratory sensitizer. No end point data for material.

Mutagenicity

Conclusion/Summary : Not expected to be a germ cell mutagen. No end point data for material. Based on assessment of the components.

Carcinogenicity

Conclusion/Summary : Not expected to cause cancer. No end point data for material. Based on assessment of the components.

Reproductive toxicity

Conclusion/Summary : Not expected to be a reproductive toxicant. No end point data for material. Based on assessment of the components.

Specific target organ toxicity (single exposure)

Conclusion/Summary : Not expected to cause organ damage from a single exposure. No end point data for material.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Target organs
EM-7210 SPENT	Not applicable.	-

Conclusion/Summary : Not expected to cause organ damage from a single exposure. No end point data for material.

Aspiration hazard

Conclusion/Summary : Not expected to be an aspiration hazard. Based on physico-chemical properties of the material. No end point data for material.

Other information

Section 11. Toxicological information

Contains : Polycyclic Aromatic Compounds (PAC/PNA): Carcinogenic in animal studies. Caused mutations in-vitro. Reproductive and developmental studies resulted in decreased fetal weights, survival and malformations, as well as reduced sperm count in males. Dermal studies resulted in increased mortality, skin irritation, liver, kidney, thymus, bone marrow, blood and lymphoid tissue toxic effects. Possible allergen and/or photoallergen.

Section 12. Ecological information

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

General characteristics of the impact on environmental objects : No known significant effects or critical hazards.

Ways of affecting the environment : Violation of storage and transport regulations, incorrect placement and incineration of waste, discharge into bodies of water or the ground, accidents and emergencies.

Toxicity

Conclusion/Summary

Acute toxicity : Not expected to be harmful to aquatic organisms.

Chronic toxicity : Not expected to demonstrate chronic toxicity to aquatic organisms

Persistence and degradability

Biodegradability : Material -- Expected to be persistent.

Bioaccumulative potential

Conclusion/Summary : Material -- Potential to bioaccumulate is low.

Environmental limits

Ingredient name	Exposure limits
aluminum oxide, non fibrous	**SANPIN 1.2.3685-21, Table 3.13: Maximum allowable concentrations (MAC) of chemicals in drinking water of centralised, including hot, non-centralised water supply systems (Russian Federation) [aluminum and its compounds]** MAC: 0.2 mg/l (as Al, total) organoleptic, increases water turbidity, Hazard class 3 **SANPIN 1.2.3685-21, Table 1.1: Maximum allowable concentrations (MAC) of pollutants in the atmospheric air of urban and rural settlements (Russian Federation) [диАлюминий триоксид]** MAC - average daily: 0.01 mg/m³ (as aluminum) resorptive effect, Hazard class 2

Mobility in soil

Mobility : Material -- Can float on water, but will sink when saturated.

Other ecological information

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Empty Container Warning (where applicable): Empty containers may contain

Section 13. Disposal considerations

residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14. Transport information

	ADR	IMDG	IATA
UN number	UN3200	UN3200	UN3200
UN proper shipping name	PYROPHORIC SOLID, INORGANIC, N.O.S. (thermocracked coke)	PYROPHORIC SOLID, INORGANIC, N.O.S. (thermocracked coke)	Pyrophoric solid, inorganic, n. o.s. (thermocracked coke)
Transport hazard class(es)	4.2	4.2	4.2
Label(s) / Mark(s)			
Packing group	I	I	I
Environmental hazards	No.	No.	No.

Additional information

ADR : **Hazard identification number** 43
Limited quantity 0
Special provisions 274
Tunnel code (B/E)

IMDG : **Emergency schedules** F-G, S-M
Special provisions 274
Flash point <37.778 °C C.C.

IATA : **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Packaging instructions: Forbidden. Cargo Aircraft Only: Forbidden. Packaging instructions: Forbidden. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

Inventory list

Australia inventory (AIIC) : Not determined.
Canada inventory (DSL-NDSL) : All components are listed or exempted.
China inventory (IECSC) : Not determined.
Japan inventory (CSCL) : Not determined.

Section 15. Regulatory information

Japan inventory (Industrial Safety and Health Act) : Not determined.

New Zealand Inventory of Chemicals (NZIoC) : Not determined.

Philippines inventory (PICCS) : Not determined.

Korea inventory (KECI) : Not determined.

Taiwan Chemical Substances Inventory (TCSI) : All components are listed or exempted.

United States inventory (TSCA 8b) : All components are active or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 8 August 2024

Date of previous issue : 15 January 2024

Version : 1.01

Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GOST = Gosudarstvennyy standart
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SGG = Segregation Group
UN = United Nations

Procedure used to derive the classification

Classification	Justification
PYROPHORIC CHEMICALS - Pyrophoric solids	Expert judgment

References : Not available.

Indicates information that has changed from previously issued version.

THIS SDS COVERS THE FOLLOWING MATERIALS :

EM-7210S

Product code : 1132047

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Section 16. Other information

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