

1. IDENTIFICATION

Product Name	Iron Oxide Black
Other Names	C.I. Pigment Black 11; Synthetic iron oxide; Triiron tetraoxide
Uses	Colourants (pigments and dyestuffs), inorganic.
Chemical Family	No Data Available
Chemical Formula	Fe ₃ O ₄
Chemical Name	Iron oxide
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Refsan A.Ş.	1. OSB. 1. CADDE NO:2 MERKEZ KÜTAHYA	+90 850 255 0 274

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Telephone

+90 850 255 0 274

2. HAZARD IDENTIFICATION

REFSAN ENDÜSTRİYEL FIRIN VE MAKİNA SANAYİ TİCARET A.Ş.
Center Office
1. OSB. 1. CADDE NO:2 MERKEZ KÜTAHYA

Phone +90 850 255 0 274
E-mail internet@refsan.com.tr
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Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Triiron tetraoxide	Fe ₃ O ₄	1317-61-9	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Get medical advice/attention if you feel unwell.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for 10 - 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Loosen tight clothing, such as a collar, tie, belt or waistband. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Do not leave the victim unattended.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; The product itself does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction. *Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	No specific fire or explosion hazard.
Hazardous Products of Combustion	Fire or heat may produce irritating and/or toxic fumes, including Metal oxides.

Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	No action shall be taken involving any personal risk or without suitable training. Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal (see SECTION 13).
Containment	Stop leak if safe to do so. Prevent dust cloud. Cover powder spill with plastic sheet or tarp to minimise spreading.
Decontamination	No information available.
Environmental Precautionary Measures	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.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised and unprotected personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). *Electrical installations/working materials must comply with the technological safety standards.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. The product should not be stored near heat sources. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust

mask/particulate respirator, P1 filter (refer to AS/NZS 1715 & 1716).

- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

- Hand protection: Handle with gloves. Recommended: Impervious gloves.

- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: 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.

Special Hazards Precautions

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. Irritating gases/fumes may be given off during burning or thermal decomposition.

Work Hygienic Practices

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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. Remove contaminated clothing and protective equipment before entering eating areas. Wash contaminated clothing before reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder
Odour	Odourless
Colour	Black
pH	ca. 3.5 - 7 (100 g/l H ₂ O)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	>1,000 °C
Freezing Point	No Data Available
Solubility	Insoluble in water (<0.5 %) 20°C
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	300 - 1,000 kg/m ³
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	4.6 - 4.7 g/cm ³
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.

Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; The product itself does not burn.
Reactions That Release Gases or Vapours	Fire or heat may produce irritating and/or toxic fumes, including Metal oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	At temperatures above 80 °C the product may become unstable and oxidise. This generates additional heat which, under unfavourable conditions, may result in the combustion of flammable materials.
Chemical Stability	The product is chemically stable.
Conditions to Avoid	Avoid generating dust. The product should not be stored near heat sources.
Materials to Avoid	No specific data.
Hazardous Decomposition Products	No decomposition if stored and applied as directed. Fire or heat may produce irritating and/or toxic fumes, including Metal oxides.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on possible routes of exposure:</p> <ul style="list-style-type: none">- Ingestion: Not a hazard in normal industrial use. No harmful effects observed.- Eye contact: Non-irritating to the eyes. Excessive exposure to airborne dust may reduce visibility and/or cause unpleasant deposits.- Skin contact: Will not irritate skin and is not likely to cause allergic skin reaction. Injury to the skin or mucus membranes can occur by direct mechanical action or by rigorous skin cleaning necessary for removal of dust.- Inhalation: Repeated inhalation of dust can produce varying degrees of respiratory irritation or lung damage. Irritating gases/fumes may be given off during burning or thermal decomposition. <p>Chronic effects: No known significant effects or critical hazards.</p>
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No known significant effects or critical hazards.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information

The generation of waste should be avoided or minimised wherever possible. Check re-use as alternative. 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.

Special Precautions for Land Fill

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Iron Oxide Black
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Iron Oxide Black
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Iron Oxide Black
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available

Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Iron Oxide Black
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Iron Oxide Black
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Iron Oxide Black
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Not Hazardous
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National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Listed
Europe (REACH)	Listed
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	IROBLA1000, IROBLA1001, IROBLA1002, IROBLA1500, IROBLA1600, IROBLA2000, IROBLA3000, IROBLA5010, IROBLB1000, IROBLB1001, IROBLB1002, IROBLB1003, IROBLB1004, IROBLB1005, IROBLB1006, IROBLB1100, IROBLB1101, IROBLB1600, IROBLB1601, IROBLB2000, IROBLB2001, IROBLB2002, IROBLB2003, IROBLB3000, IROBLB3001, IROBLB3002, IROBLB3003, IROBLB3004, IROBLB4000, IROBLB4001, IROBLB4100, IROBLB4101, IROBLC1000, IROBLC1001, IROBLC1002, IROBLC1500, IROBLC1501, IROBLC2000, IROBLC2001, IROBLC2100, IROBLC2200, IROBLC2800, IROBLC3000, IROBLC3025, IROBLC3050, IROBLC3100, IROBLC3150, IROBLC3180, IROBLC3200, IROBLC3250, IROBLC3280, IROBLC3300, IROBLC3320, IROBLC4400, IROBLD1000, IROBLD1500, IROBLD2000, IROBLE1000, IROBLE1001, IROBLE1100, IROBLE1200, IROBLE2000, IROBLE2200, IROBLE2300, IROBLE2500, IROBLE3300, IROBLF1000, IROBLG1000, IROBLG1001, IROBLG1500, IROBLH1000, IROBLI2300, IROBLI2301, IROBLX8000, IROBLY1000, IROBLY8000
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Revision	5
Revision Date	09 Aug 2021
Reason for Issue	Update SDS
Key/Legend	<p>< Less Than</p> <p>> Greater Than</p> <p>AICS Australian Inventory of Chemical Substances</p> <p>atm Atmosphere</p> <p>CAS Chemical Abstracts Service (Registry Number)</p> <p>cm² Square Centimetres</p> <p>CO₂ Carbon Dioxide</p> <p>COD Chemical Oxygen Demand</p> <p>deg C (°C) Degrees Celcius</p> <p>EPA (New Zealand) Environmental Protection Authority of New Zealand</p> <p>deg F (°F) Degrees Farenheit</p> <p>g Grams</p> <p>g/cm³ Grams per Cubic Centimetre</p> <p>g/l Grams per Litre</p> <p>HSNO Hazardous Substance and New Organism</p> <p>IDLH Immediately Dangerous to Life and Health</p> <p>immiscible Liquids are insoluable in each other.</p> <p>inHg Inch of Mercury</p> <p>inH₂O Inch of Water</p> <p>K Kelvin</p> <p>kg Kilogram</p> <p>kg/m³ Kilograms per Cubic Metre</p> <p>lb Pound</p> <p>LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.</p> <p>LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.</p> <p>ltr or L Litre</p> <p>m³ Cubic Metre</p> <p>mbar Millibar</p> <p>mg Milligram</p> <p>mg/24H Milligrams per 24 Hours</p> <p>mg/kg Milligrams per Kilogram</p> <p>mg/m³ Milligrams per Cubic Metre</p> <p>Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.</p> <p>mm Millimetre</p> <p>mmH₂O Millimetres of Water</p> <p>mPa.s Millipascals per Second</p> <p>N/A Not Applicable</p> <p>NIOSH National Institute for Occupational Safety and Health</p> <p>NOHSC National Occupational Heath and Safety Commission</p> <p>OECD Organisation for Economic Co-operation and Development</p> <p>Oz Ounce</p> <p>PEL Permissible Exposure Limit</p> <p>Pa Pascal</p> <p>ppb Parts per Billion</p> <p>ppm Parts per Million</p> <p>ppm/2h Parts per Million per 2 Hours</p> <p>ppm/6h Parts per Million per 6 Hours</p> <p>psi Pounds per Square Inch</p> <p>R Rankine</p> <p>RCP Reciprocal Calculation Procedure</p> <p>STEL Short Term Exposure Limit</p> <p>TLV Threshold Limit Value</p> <p>tne Tonne</p> <p>TWA Time Weighted Average</p> <p>ug/24H Micrograms per 24 Hours</p> <p>UN United Nations</p> <p>wt Weight</p>

