

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 28-Dec-2020***

Revision date 02-Oct-2023

Revision Number 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s)	61465***
Safety data sheet number	61465***
Product Name	DIIRON TRIOXIDE
Form	Contains Nanoforms***
Synonyms	17045 RED IRON OXIDE, 17045 RED IRON OXIDE IRRA, 90183 COGILOR ROUGE, 90183 COGILOR ROUGE MICRO, 99077 RED IRON OXIDE MILLED***
Pure substance/mixture	Mixture***

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

Recommended use	Pigment Colouring agent Paper production Plastics Cosmetics Food/Feed additive Pharmaceutical***
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1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address	SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone	SGS - +32 (0)3 575 55 55 (24h)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified***

2.2. Label elements

Not classified***

Hazard statements

Not classified***

EUH210 - Safety data sheet available on request***

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.***

2.3. Other hazards

No information available.

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

Not applicable***

3.2 Mixtures***

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
RED IRON OXIDE*** 1309-37-1	> 98%	215-168-2***	-	-	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

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

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.***

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.***

Skin contact

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if symptoms occur.***

Ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.***

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

Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.***
Eyes	Dust contact with the eyes can lead to mechanical irritation.***
Dermal	May cause slight irritation.***
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea***

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

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed.***
Hazardous combustion products	Carbon oxides.***

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Avoid breathing dust.***
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Avoid generation of dust. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Take up mechanically, placing in appropriate containers for disposal.***
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Do not breathe dust.***

General hygiene considerations Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities**7.3. Specific end use(s)**

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Exposure Limits ***

Chemical name	United Kingdom
RED IRON OXIDE*** 1309-37-1	TWA: 5 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 10 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³ ***

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers No information available

Derived No Effect Level (DNEL) - General Public No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.***
Hand protection	Wear suitable gloves. Gloves must conform to standard EN 374.***
Skin and body protection	Wear appropriate clothing to prevent reasonably probable skin contact.***
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Powder***
Appearance	Dusty powder***
Colour	red***
Odour	Odourless.***
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		Not applicable***
Initial boiling point and boiling range		Not applicable***
Flammability		No information available
Flammability Limit in Air		No information available
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point		No information available
Autoignition temperature		Not applicable***
Decomposition temperature		No information available
pH		No information available
pH (as aqueous solution)	5*** -*** 9***	solution (10 %)**
Kinematic viscosity		Not applicable***
Dynamic viscosity		Not applicable***
Water solubility	Insoluble in water dispersible***	***
Solubility(ies)	Insoluble Organic solvents soluble in Mineral Acids***	No information available
Partition coefficient		Not applicable***
Vapour pressure		Not applicable***
Relative density	~ 5.0***	***
Bulk density	~ 0.7 kg/l***	
No information available		Relative vapour density
No information available		Particle characteristics
		Particle Size
		Particle Size
		Distribution

Explosive properties	No information available
Oxidising properties	No information available

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.***

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.***

Eye contact Dust contact with the eyes can lead to mechanical irritation.***

Skin contact May cause slight irritation.***

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.***

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document ***

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
RED IRON OXIDE***	> 10000 mg/kg (Rat) ***	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Based on available data the classification criteria are not met.***
Serious eye damage/eye irritation	Based on available data the classification criteria are not met.***
Respiratory or skin sensitisation	Based on available data the classification criteria are not met.***
Germ cell mutagenicity	Based on available data the classification criteria are not met.***
Carcinogenicity	Based on available data the classification criteria are not met.***
Reproductive toxicity	Based on available data the classification criteria are not met.***
STOT - single exposure	Based on available data the classification criteria are not met.***
STOT - repeated exposure	Based on available data the classification criteria are not met.***
Aspiration hazard	Based on available data the classification criteria are not met.***
Other adverse effects	No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity	The environmental impact of this product has not been fully investigated.***
Unknown aquatic toxicity	Contains 0 % of components with unknown hazards to the aquatic environment.***

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Leuciscus idus***	LC50***	> 1000 mg/L***	48 hours***	

RED IRON OXIDE (1309-37-1)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Leuciscus idus***	LC50***	> 1000 mg/L***	48 hours***	

12.2. Persistence and degradability

Persistence and degradability	No information available.***
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12.3. Bioaccumulative potential

Bioaccumulation	There is no data for this product.
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12.4. Mobility in soil

Mobility in soil Insoluble.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
RED IRON OXIDE***	The substance is not PBT / vPvB***

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

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 hazards No***
 14.6 Special precautions for user
 Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
 14.3 Transport hazard class(es) Not regulated
 14.4 Packing group Not regulated
 14.5 Environmental hazards No***
 14.6 Special precautions for user
 Special Provisions None
 14.7 Maritime transport in bulk according to IMO instruments No information available

RID

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 hazards No***
 14.6 Special precautions for user
 Special Provisions None

ADR

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 hazards	No***
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note ***Indicates updated data since last publication

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity***	Calculation method***
Acute dermal toxicity***	Calculation method***
Acute inhalation toxicity - gas***	Calculation method***
Acute inhalation toxicity - vapour***	Calculation method***
Acute inhalation toxicity - dust/mist***	Calculation method***
Skin corrosion/irritation***	Calculation method***
Serious eye damage/eye irritation***	Calculation method***
Respiratory sensitisation***	Calculation method***
Skin sensitisation***	Calculation method***
Mutagenicity***	Calculation method***
Carcinogenicity***	Calculation method***
Reproductive toxicity***	Calculation method***
STOT - single exposure***	Calculation method***
STOT - repeated exposure***	Calculation method***
Acute aquatic toxicity***	Calculation method***
Chronic aquatic toxicity***	Calculation method***
Aspiration hazard***	Calculation method***
Ozone***	Calculation method***

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Prepared By Lisa Bland***
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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet