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

1.1. Product identifier
Mixture identification:

Trade name: FERROBLOCK
Trade code: EXP00113663
Registration Number N/A
UFI: 0S30-7006-M00M-S5J4

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use: SU 3 Industrial Use; SU 4 Food Industry
Uses advised against: N.A.

1.3. Details of the supplier of the safety data sheet
Company: PERDOMINI See differently Via Salvo D'Acquisto, 2
37036 S. Martino B.A. (Verona)
Tel. +39 045 8788611 - Fax +39 045 8780322
Responsable: info@perdomini-ioc.com

1.4. Emergency telephone number
112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Regulation (EC) n. 1272/2008 (CLP)

Skin Irrit. 2	Causes skin irritation.
Eye Dam. 1	Causes serious eye damage.
STOT SE 3	May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. Label elements
Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word

Danger

Hazard statements

H315	Causes skin irritation.

H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Precautionary statements

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/clothing and eye/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor f you feel unwell.

Special Provisions:

EUH031 Contact with acids liberates toxic gas.

Contains

Citric Acid

Potassium metabisulphite

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: FERROBLOCK

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
30-40 %	Citric Acid	CAS:5949-29-1 EC:201-069-1 Index:607-750-00-3	Eye Irrit. 2, H319; STOT SE 3, H335	01-2119457026-42-XXXX
30-40 %	Potassium metabisulphite	CAS:16731-55-8 EC:240-795-3	Skin Irrit. 2, H315; Eye Dam. 1, H318, EUH031	01-2119537422-45-0000

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediatley and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use localized ventilation system.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

Keep away from acids.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Potassium metabisulphite

CAS: 16731-55-8	ACGIH	Short Term: 0.25 ppm
	EU	Long Term: 0.5 mg/m3

Predicted No Effect Concentration (PNEC) values

Citric Acid

CAS: 5949-29-1	Exposure Route: Fresh Water; PNEC Limit: 0.44 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.044 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 3.46 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 34.6 mg/kg
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1000 mg/l
	Exposure Route: Soil; PNEC Limit: 33.1 mg/kg

Potassium metabisulphite

CAS: 16731-55-8	Exposure Route: Marine water; PNEC Limit: 0.12 mg/l
	Exposure Route: Fresh Water; PNEC Limit: 1.17 mg/l
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 88.1 mg/l

Derived No Effect Level (DNEL) values

Potassium metabisulphite

CAS: 16731-55-8	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 263 mg/kg
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Consumer: 78 mg/kg
	Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 10 mg/kg

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Guanti in gomma standard EN374

Respiratory protection:

Maschera facciale

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Solid
Colour:	white
Odour:	sulphur
Odour threshold:	non applicabile
pH:	2.50
Kinematic viscosity:	N.A.
Melting point/freezing point:	n.a.|CELSIUS
Boiling point or initial boiling point and boiling range:	n.a. |CELSIUS
Flash point:	not fiamable
Lower and upper explosion limit:	|CELSIUS N.A.

Relative vapour density:	n.a.
Vapour pressure:	N.A.
Density and/or relative density:	non disponibile
Solubility in water:	soluble
Solubility in oil:	unsoluble un
Partition coefficient n-octanol/water (log value):	solubile N.A.
Auto-ignition temperature:	absent
Decomposition temperature:	N.A.
Flammability:	N.A.
Volatile Organic compounds - VOCs =	N.A.

Particle characteristics:

Particle size: N.A.

9.2. Other information

Explosive properties:	absent
Evaporation rate:	non applicabile
Conductivity:	non disponibile
Oxidizing properties:	abent
Fat Solubility:	unsoluble

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under standard conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with dithiocarbamates, elementary metals (alkalis, alkaline earth, powder alloys or vapours) nitrides, and powerful reducing agents.

It may generate toxic gases on contact with dithiocarbamates, inorganic fluorides, inorganic sulphides, and powerful oxidising agents.

It may catch fire on contact with elementary metals (alkalis and alkaline earth).

10.4. Conditions to avoid

Humidity

10.5. Incompatible materials

Nessuna informazione disponibile

10.6. Hazardous decomposition products

Nessuna informazione disponibile

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Dam. 1(H318)
d) respiratory or skin sensitisation	Not classified
	Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified

	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	The product is classified: STOT SE 3(H335)
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

Citric Acid

CAS: 5949-29-1	Generic information:	LD50 orale (ratto): > 5000 mg/kg
	a) acute toxicity	LD50 Skin Rat = 2000 mg/kg bw
		LD50 Oral Mouse = 5400 mg/kg bw

Potassium metabisulphite

CAS: 16731-55-8	a) acute toxicity	LC50 Inhalation Rat > 5.5 mg/l
		LD50 Oral Rat > 1540 mg/kg bw
		LD50 Skin Rat > 2000 mg/kg

Sub-acute and Chronic Toxicity

Citric Acid

CAS: 5949-29-1	Sub-Acute oral	Value: 4000; Species: Rat

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Citric Acid

CAS: 5949-29-1	a) Aquatic acute toxicity: LC50 Fish = 440 mg/L 48h - Leuciscus idus melanotus
	a) Aquatic acute toxicity: LC50 Daphnia = 1535 mg/L 24 - Daphnia magna
	a) Aquatic acute toxicity: LC50 Algae = 425 mg/L 168 - Scenedesmus quadricauda
	c) Bacteria toxicity: LC50 Batteri > 10000 mg/L 16 - Pseudomonas

Potassium metabisulphite

CAS: 16731-55-8	a) Aquatic acute toxicity: LD50 Fish O. mykiss = 149.5 mg/L 96h
	a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 74.9 mg/L 48h
	a) Aquatic acute toxicity: EC50 Algae = 36.8 mg/L 72h
	b) Aquatic chronic toxicity: NOEC Fish Danio rerio = 50 mg/L
	b) Aquatic chronic toxicity: NOEC Daphnia Daphia magna = 8.41 mg/L
	b) Aquatic chronic toxicity: NOEC Algae Scenedesmus subspicatus = 28 mg/L

12.2. Persistence and degradability

Citric Acid

CAS: 5949-29-1	Not persistent and Biodegradable	Test: Dissolved organic carbon; Value: 728 Notes: 28 giorni. mgO2/g
	Not persistent and Biodegradable	Test: Biochemical oxigen demand; Value: 526 Notes: 28 giorni. mgO2/g

12.3. Bioaccumulative potential

FERROBLOCK

Non sono disponibili informazioni

Citric Acid

CAS: 5949-29-1 Not bioaccumulative

Potassium metabisulphite

CAS: 16731-55-8 Not bioaccumulative

12.4. Mobility in soil

FERROBLOCK

Non sono disponibili informazioni

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Additional disposal information:

Do not dispose the product together with urban waste and do not put it in the sewer system.

Both the product and the related empty packaging must be managed as special waste in compliance with the legislation in force, favoring, where possible, recovery operations with respect to disposal operations.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N.A.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

Road and Rail (ADR-RID):

N.A.

Air (IATA):

N.A.

Sea (IMDG):

N.A.

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)
Regulation (EU) n. 2023/707
Regulation (EU) n. 2023/1434 (ATP 19 CLP)
Regulation (EU) n. 2023/1435 (ATP 20 CLP)
Regulation (EU) n. 2024/197 (ATP 21 CLP)
Regulation (EU) n. 2020/878

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: None.

Restrictions related to the substances contained: None.

Provisions related to directive EU 2012/18 (Seveso III):

None

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 3: extremely hazardous.

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH031	Contact with acids liberates toxic gas.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Code	Hazard class and hazard category	Description
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
STOT SE 3, H335	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European

Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

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

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: Keep Away From Heat

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/A: Not Applicable

N/D: Not defined/ Not available

NA: Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction

PNEC: Predicted No Effect Concentration.

PSG: Passengers

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.