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SAFETY DATA SHEET
(According to Regulation EC No 453/2010)**1 - IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING**

1.1 Product identifier	
Chemical name:	Fulvic acid
Trade name:	FULVIC 100
Synonyms:	N.A.
CAS Registry number:	N.A.
EINECS No:	N.A.
Index No.:	N.A.
Registration number:	N.A.
Molecular weight:	N.A.
Formula:	N.A.
1.2 Relevant identified uses of the substance and uses advised against	
Relevant identified uses of the substance:	Fertilizer
1.3 Details of the supplier of the safety data sheet:	
Company:	VALAGRO Spa Zona Industriale 66041 ATESSA (CHIETI) ITALY Tel. (+39) 0872 8811 Fax (+39) 0872 881382
Competent person responsible for the safety data sheet:	E-mail: regulatory@valagro.com
1.4 Emergency telephone number:	Tel. (+39) 02 66101029 (Centro Antiveleni Ospedale Niguarda Milano) Tel. (+39) 0872 8811 (Valagro Spa _ from Monday to Friday from 8.30 to 13:00 and from 14:00 to 17.30 h)

2 - HAZARDS IDENTIFICATIONS

2.1 Classification of the substance:
Classification according to Regulation (EC) No 1272/2008: Not classified as dangerous
Classification according to Directive 67/548/EEC: Not classified as dangerous
Most important adverse physicochemical, human health and environmental effects: see sections from 9 to 12.
2.2 Label Elements:
Hazard pictograms : Hazard pictograms : none



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Signal word: none

Hazard statements: none

Precautionary statements: none.

2.3 Other hazards:

None

3 - COMPOSITION/INFORMATION ON INGREDIENTS

Fulvic acids based product

4 - FIRST AID MEASURES

4.1 Description of first aid measures

Routes of exposure:

- **Inhalation:**
In the usual work condition the event it's not probable.
At high temperature, in case of inhalation, well ventilate the room.
Take away the subject from the contaminated area and move to fresh air.
In case of malaise seek medical advice
- **Skin:**
Take off immediately all contaminated clothing. Rinse immediately and abundantly with water and soap the contaminated parts, even if only suspicious.
- **Eyes:**
Rinse immediately and abundantly with water for at least 10 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing; then protecting the eyes with a sterile gauze or cleaned handkerchief. Seek medical advice.
- **Ingestion:**
Do not induce vomiting. If the subject is conscious give little water to drink. Seek medical advice, showing the safety data sheet.

Advice:

Who provides the first medical aid must use the individual protection equipment (latex gloves and safety glasses)

4.2 Most important symptoms and effects, both acute and delayed

- **Inhalation:**
The inhalation of product in the usual work condition it's little probable.
In case of high temperature, avoid to breath fumes that could induce nose and respiratory system irritation.
- **Skin:**
Irritation and reddening
- **Eye:**
Eyelids irritation, lachrymation and swelling
- **Ingestion:**



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Nausea, abdominal cramps, diarrhea

4.3 Indication of any immediate medical attention and special treatment needed

Seek immediately medical advice showing the safety data sheet.

5 - FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media:**

Plenty water

Information on the appropriate extinguishing media:

Not relevant

Unsuitable extinguishing media:

Sand and gases

Indications if extinguishing media are inappropriate for a particular situation involving the substance or mixture:

None

5.2 Special hazards arising from the substance:

In case of fire avoid to breath fumes , it may release CO, CO2.

5.3 Advice for firefighters

In case of fire and in close proximity wear the protective clothes heat resistant and air respiratory equipment.

6 - ACCIDENTAL RELEASE MEASURE**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel:**

Keep away from the affected area people not involved in the emergency intervention

Alert the responsible of the internal emergency.

For emergency responders:

Wear protective clothes giving a total skin protection, latex gloves and safety glasses.

6.2 Environmental precautions:

Avoid waterway and discharging contamination, competent authority must be informed in case of waterway accidental contamination

6.3 Methods and material for containment and cleaning up:

Containing spill with earth or sand.

Any release should be immediately cleaned up wearing protective clothes(suit, latex gloves and safety glasses)

If possible store into a clean container either to reuse or disposal. If possible absorb with the inert material.

After store , wash the area with water and suitable materials.

6.4 Reference to other sections:

referred to Sections 8 and 13

7 - HANDLING AND STORAGE



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7.1. Precautions for safe handling

Avoid direct contact with skin and eyes and the fumes inhalation. See the following section 8.

Don't reuse the empty containers before an accurate cleaning.

Remove all protective clothing before access to the areas where you eat

Always respect hygienic rules, do not drink neither eat in the working areas

7.2 Conditions for safe storage, including any incompatibilities

Avoid the contact with the acid substances.

Store in well-ventilated areas far from heat source

7.3 Specific end use(s)

None

8 - EXPOSURE CONTROL/ PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values:

ACGIH

Substance name	TLV-STEL (ppm)	note	critical effects
Fulvic acids	1	none	N.A.

Biological limit values:

DNEL: N.A.

PNEC: N.A.

Recommended monitoring procedures: N.A.

8.2 Exposure control

- **Appropriate engineering controls:**

Operate in well-ventilated areas

- **Individual protection measures, such as personal protective equipment:**

The personal protective equipment must be compliant to the regulation UNI -EN in force.

Eye / face protection:

Wear safety glasses according to the standard EN 166, don't use contact lenses.

Skin protection:

-**Hand protection:** Wear latex gloves according to the standard EN 374

-**Other:** Wear total skin protection clothes

Respiratory protection:

Not necessary in the usual work condition

Thermal hazards:

Not relevant

- **Environmental exposure controls:** N.A.

9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance (25° C):	Brown
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	microgranules	
Odour:	N.A.	
Odour threshold:	N.A.	
pH:	N.A.	at 25 °C
Melting point/freezing point:	N.A.	
Initial boiling point and boiling range:	N.A.	
Flash point:	N.A.	
Evaporation rate:	N.A.	
Flammability (solid, gas):	N.A.	
Upper/lower flammability or explosive limits:	N.A.	
Vapour pressure:	N.A.	
Vapour density:	N.A.	
Relative density:	0.62	
Solubility:		
- Solubility in water:	300	g/l at 25°C
- Lipid solubility:	N.A.	g/l at 25°C
Partition coefficient: n-octanol/water	N.A.	
Auto-ignition temperature:	N.A.	
Decomposition temperature:	N.A.	
Viscosity:	N.A.	
Explosive properties:	N.A.	
Oxidising properties:	N.A.	
9.2 Other information		
pH water solution 1%	5.2	at 25° C
Conductivity	0.22	(1%) mS/cm 18 °C

10 - STABILITY AND REACTIVITY

10.1 Reactivity:

Avoid the contact with flames, fire sources and atmospheric agents

10.2 Chemical stability:

Stable at the usual work condition

10.3 Possibility of hazardous reactions:

Can react with strong oxidizing agents developing carbonic dioxide

10.4 Conditions to avoid:

Heat source and oxidizing agents

10.5 Incompatible materials:

Oxidizing agents



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10.6 Hazardous decomposition products:

Carbon dioxide and carbon oxide

11 - TOXICOLOGICAL INFORMATION

Toxicological (health) effects caused by exposure to the substance: see also sections 2 and 4.

11.1 Information on toxicological effects

- **acute toxicity:**
not available data
- **skin corrosion/irritation:**
can induce irritation and reddening
- **serious eye damage/irritation:**
eyelids irritation, lachrymation and swelling
- **respiratory or skin sensitisation:**
not available data
- **germ cell mutagenicity:**
not available data
- **Carcinogenicity:**
not available data
- **reproductive toxicity:**
not available data
- **STOT-single exposure:**
not available data
- **STOT-repeated exposure**
not available data
- **aspiration hazard:**
in usual work condition the product inhalation is little probable
in case of high temperatures avoid to breath fumes that could induce nose and respiratory system irritation.

Information on likely routes of exposure:

Inhalation: event little probable
Skin: can induce skin irritation and reddening
Eye: eyelids irritation, lachrymation and swelling
Ingestion: Nausea, abdominal cramps, diarrhea

Symptoms related to the physical, chemical and toxicological characteristics:

Skin and eyes irritation
After ingestion may occur nausea, abdominal cramps, diarrhea due to quantity of ingestion.

Other information:

N.A.

12 - ECOLOGICAL INFORMATION

Use according to good working rules, avoid to dispose of the product in the environment (see sections 6, 7, 13,14 e 15).

12.1 Toxicity:

Don't release in the environment. High quantity can induce pH variation in the ecological water system.

12.2 Persistence and degradability:

Not available data

12.3 Bioaccumulative potential:

Not available data



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12.4 Mobility in soil:

Not available data

12.5 Results of PBT and vPvB assessment

N.A.

12.6 Other adverse effects

N.A.

13 - DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Recover the product, if possible, or send to the incineration and disposal system.
Avoid waterway and discharging contamination.
Follow the local and national disposition in force.

14 - TRANSPORT INFORMATION

Not dangerous product within the meaning of transport regulations

15 - REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance:**

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments. Council Directive 1999/45/EC (Classification, packaging and labelling of dangerous preparations) and subsequent amendments. Regulation (EC) nr 1272/2008 (CLP). Commission Directive 98/24/EC (Protection of the health and safety of workers from the risk related to chemical agent).

Commission Directive 2000/39/EC occupational exposure limit values).

Regulation (EC) No 1907/2006 (REACH).

The product is not in the list of dangerous substances of the Annex I of European regulation 689/2008 about exportation and importation of dangerous substances.

15.2. Chemical safety assessment:

N.A.

16 - OTHER INFORMATION

Sections modified from previous version : 1,2, 3

This MSDS was revised to get it compliant to regulation 453/2010 and cancels and replaces any preceding release. 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.

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

ACGIH - Threshold Limit Values - 2004 edition



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ESIS

Acronyms used in the safety data sheet:

ADN: Accord european relative au transport international des marchandises dangereuses par voies de navigation interieures

ADR: Accord european relative au transport International des marchandises dangereuses par route

ACGIH: American Conference of Governmental Industrial Hygienist

LC50: Lethal concentration 50 (Lethal Concentration for the 50% of the individuals)

CLP: Classification, Labelling and Packaging (Classificazione, Etichettatura e Imballaggio)

CSR: Chemical Safety Report

LD 50: Lethal Dose 50 (Lethal dose for the 50% of the individuals)

DNEL : Derived No effect level

IARC: International Agency for Research on Cancer

IATA: International air transport association

ICAO: International Civil aviation Organization (Organizzazione Internazionale dell'Aviazione Civile)

Codice IMDG: International Maritime Dangerous Goods code

PBT: Persistent, bioaccumulative and toxic

PNEC: Predicted No Effect Concentration

RID: Reglement concernent le transport International ferroviarie des marchandises dangereuses **STEL:** short term exposure limit

TLV: threshold limit value

TWA: Time Weighted Average

UE: European Union

vPvB: Very persistent very bioaccumulative

N.A. : not available