

MATERIAL SAFETY DATA SHEET

radiello[®]: chemiadsorbing cartridge cod. 165

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CLINICA DEL LAVORO E DELLA RIABILITAZIONE
I.R.C.C.S.

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1. Product and company identification

1.1 Product Information	radiello [®] : chemiadsorbing cartridge cod. 165
1.1.1 Use	Sampling Substrate for environmental assays of aldehydes
1.1.2 Trade Name	Adsorbing cartridge code 165
1.2 Company Identification	Fondazione Salvatore Maugeri
1.2.1 Name of supplier	Fondazione Salvatore Maugeri
Address	Centro di Ricerche Ambientali/Padova Via Svizzera 16, 35127 Padova E-mail: fsmgd@fsm.it
Telephone number	Tel. 0498 064 511 - Fax 0498 064 555
1.3 Emergency contact number	
National Toxicology Center	Tel. 0382 24444

2. Composition. Information on ingredients

The sampling device is made by a stainless steel micronet electro tapered filled with the adsorbing made by the following substances identified under the rule 2001/59 recognized in Italy with the force of law since 14/06/2002:

<i>Ingredients</i>	<i>Cas#</i>	<i>%</i>	<i>Symbol</i>	<i>R Frases</i>
FLORISIL LB Sigma - Aldrich cod 20281	1343-88-0	>98	not required	not required
2,4 DINITROPHENYLHYDRAZINE Sigma - Aldrich cod 42210	119-26-6	<2	Xn, F	R 1, R11, R22

3. Health hazard identification

The product is not classified as hazardous according to directive 1999/45 and Law N. 65 of 14/03/03 (Hazardous Products) because the 2,4 DINITROPHENYLHYDRAZINE concentration is not over the value of the 25% to be classified R 22 "harmful if swallowed" and moreover the lower concentration in the blended and special preparation mode (homogeneous disperse on inert material) and packaging (800mg single pack each) allowed this products to be not classified as R 1 "Dry material is an explosive" e R 11 "Easily flammable".

Health risk: None Environment risk: None Chemical-Physical damage: None

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4. First Aid Measures

- 4.1 General Indications** In case of or if any symptom is present call a doctor showing this MSDS
Do not administer any substances by mouth to an unconscious person.
- 4.2 First aid procedures in the case of:**
- 4.2.1 Inhalation** Should be not expected effects come from products vapor inhalation. Nevertheless, in case of breathing symptoms (cough, dispnea), remove to fresh air. Put the person in semi-sited position and if not breathing gives the artificial respiration. If breathing is difficult give oxygen.
- 4.2.2 Contact with the skin** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a doctor.
- 4.2.3 Contact with the eyes** In case of contact with eye, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with finger. Call a doctor.
- 4.2.4 Ingestion** If swallowed, wash out mouth with water provided person is conscious. Call a doctor.

5. Fire fighting measures

The product is not flammable. Nevertheless, in case of fire in an indoor ambient (e.g.: Warehouse) follow the rules below:

- 5.1 General indications** Send away the people. Allontanare i non addetti ai lavori. Stay on the upperwind side. Doesn't come indoor without appropriate safety apparatus specify at point 5.5
- 5.2 Entinguishing media** Water spry, Carbon Dioxide, Appropriate foam, dry chemical powder.
- 5.3 Entinguishing media that must not be used** Not known
- 5.4 Exposure risks in the case of fire** Emits toxic fumes under fire conditions (e.g.: CO – NO_x). Refer to point 11.2. for symptoms.

5.5 Fire fighting equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. Accidental release measures

6.1 Personal precautions

It is suggested to handle the product with safety gloves. Avoid skin and eyes contact.

6.2 Environmental precautions

Due to the handled product quantity and safety packaging mode is not recognized the possibility to create environment pollution and damage. Don't spread the product on environment.

6.3 Cleaning-up methods**6.3.1 Decontamination**

In case of spread, avoid raising dust. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

6.3.2 Elimination

Eliminate the polluted aqueous solution, under the local safety rules.

7. Handling and storage

7.1 Handling**7.1.1 Technical measures**

Ensure a proper ventilation. No any other requirement.

7.1.2 Precautionary measures

Avoid contact with the eyes, skin and clothing. Avoiding breathing dust. Avoid prolonged or repeated exposure. Don't smoke. Keep out from ignition source.

7.2 Storage**7.1.1 Technical measures**

Take all the safety measure to avoid accidental outdoor product spread in case of breaking.

7.1.2 Storage conditions

Keep container closet with the original label or in appropriate storage container in a fresh, dry ambient. Keep away from flame.

8. Exposure control. Personal protection

8.1 General hygiene measures	Follow the In Force Safety rules and the supplier company recommendation as described in point 7.1. Ensure good ventilation. Wash thoroughly after handling.
8.2 Olfactive perception threshold	Not applicable.
8.3 Professional Exposure Limits	Not known
8.4 Exposure Bio marker	Metahemoglobine
8.4 Personal protection measures	
8.5.1 Respiratory protection	Not needed.
8.5.2 Eye protection	Safety Glass
8.5.3 Hand protection	Chemical Safety Gloves.
8.5.4 Skin protection	Adequate protective lab coat.

9. Physical and chemical Properties

9.1 Physical State	Solid powder
9.2 Color	Yellow
9.3 Odor	Not detectable
9.4 pH	Not applicable
9.5 Boiling point	Not applicable
9.6 Melting point	Not applicable
9.7 Flash point	Not inflammable
9.8 Flammability	Not inflammable
9.9 Auto-ignition	Not inflammable
9.10 Explosive properties	Not known

9.11 Combustion properties	Not known
9.12 Vapor pressure	Not applicable
9.13 Relative density	Not applicable
9.14 Solubility in water	Not applicable
9.15 Solubility in organic solvents	Not applicable
9.16 Partition coefficient n-octanol/water	Not applicable
9.17 Vapor density	Not applicable
9.18 Miscibility	Not applicable
9.19 Evaporation rate	Not applicable
9.20 Conductivity	Not applicable
9.21 Viscosity	Not applicable

10. Stability and reactivity

10.1 Conditions to avoid	Stable product, Avoid oxidizing and warming source
10.2 Materials to avoid	Strong oxidizing agents
10.3 Hazardous decomposition products	Hazardous Decomposition products are: Carbon Monoxide, Carbon dioxide, Nitrogen Oxides.

11.Toxicological information

11.1 Toxicological data	The only component of the product with Oral DL ₅₀ on rat below 2000 mg/Kg is due to the 2,4DINITROPHENYLHYDRAZINE, Toxicological data reported will be related to this substance.
11.2 Acute Toxicity	DL50 oral rat 500 mg/Kg DL50 intraperitoneal mouse 450 mg/Kg
11.2.1 Skin contact	Rabbit eyes, 500mg 24 h, mild irritation effect
Sign and Symptoms of Exposure	Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.
Route of Exposure	Skin Contact: May cause skin irritation Skin Absorption: May be harmful is absorbed through the skin. Eye Contact: May cause eye irritation. Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be Harmful if inhaled. Ingestion: Harmful if swallowed.
11.3 Chronic Exposure	Rat : 50 mg/L, Cell type: Liver, Unscheduled DNA synthesis Mouse 1900 UMOL/Kg intraperitoneal, DNA damage ZPOS: Histidine reversion (Ames).

12. Ecological information

12.1 Mobility	No data reported
12.2 Life time and degradability	N.D.
12.3 Bioaccumulation power	N.D.
12.4 Water Toxicity	N.D.
12.5 Observation	Don't spread the product in ambient or part of it.

13. Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. After the use, the product should be disposed as per other laboratory products. Observe all federal, state, and local environmental regulations.

14. Transport information

14.1 General information	No special International rules is requires for the transport of this product.
14.2 Road and rail transport (ADR/RID)	Not dangerous.
14.3 Marine transport (IMDG/IMO)	Not dangerous.
14.4 Air transport (ICAO/IATA)	Not dangerous.

15. Regulatory Information

15.1 Labeling	Not required
15.2 Hazard symbols	None
15.3 Risk phrases	None
15.4 Caution suggestions	None

16. Other information

<i>Ingredients</i>	<i>Symbol</i>	<i>R phrases</i>
FLORISIL LB Sigma - Aldrich cod 20281	none	not required
2,4DINITROPHENYLHYDRAZINE Sigma - Aldrich cod 42210	Xn, F	R 1: Explosive when dry R11: Highly Flammable. R22: Harmful if swallowed.

Advice to users

The information in this material safety data sheet is based on our current knowledge and on Italian and European Community regulations. The product must not be used for any purposes other than those specified in section 1, in the absence of written instructions on its handling. It is the user's responsibility to take all measures necessary to conform with local and national regulations.

The information in this data sheet complies with Directive CEE 1999/45 (assimilated in Italy by Law No. 65 of 14/03/03) and with Directive CEE 2001/58 (assimilated in Italy by Ministerial Decree 7/9/2002). The set of regulations mentioned is simply intended to help the user comply with his or her obligations during the use of this product