



## Safety Data Sheet

|  |                                     |   |                   |              |                  |                  |
|--|-------------------------------------|---|-------------------|--------------|------------------|------------------|
| <b>★ 1. Identification of substance / preparation and of the company / undertaking -</b>   |                                     |   |                   |              |                  |                  |
| - Product details  |                                     |   |                   |              |                  | *Use : Colourant |
| Trade name   | :                                   | Majumdar Orange   |                   |              |                  |                  |
| :  |                                     |   |                   |              |                  |                  |
| - Manufacturer / Supplier  | 3, Sarkar Bye Lane, P.O:Burrabazar, |   |                   |              |                  |                  |
| Manufacturer   | :                                   | P.S: Girish Park, Kolkata- 700007                                 |                   |              |                  |                  |
|  |                                     | Ph: +91 9831004020  |                   |              |                  |                  |
| <b>2. Composition / Information on ingredients -</b>   |                                     |   |                   |              |                  |                  |
| - Chemical characterization  | :                                   | Cadmium Sulphide and Selenide                                     |                   |              |                  |                  |
|  |                                     | Cadmium (Total) : 98%;  | Selenium : 2%     |              |                  |                  |
| - Identification number(s) -   |                                     |   |                   |              |                  |                  |
| C. I. Name   | :                                   | Pigment Orange 20   |                   |              |                  |                  |
| C. I. No.(Principal Pigment):  | 77202                               |   |                   |              |                  |                  |
| CAS No. Designation  | :                                   | 12656-57-4  |                   |              |                  |                  |
| EINECS Number  | :                                   | 235-758-3   |                   |              |                  |                  |
| TSCA Number  | :                                   | 12656-57-4  |                   |              |                  |                  |
| - Dangerous components :   |                                     |   |                   |              |                  |                  |
| <u>CAS No.</u>   | <u>EC No.</u>                       | <u>Designation</u>  | <u>Percentage</u> | <u>Index</u> | <u>R-phrases</u> |                  |
| None   |                                     |   |                   |              |                  |                  |
| <b>3. Hazards Identification -</b>   |                                     |   |                   |              |                  |                  |
| No labeling with symbols T+, T, C, Xn or Xi as per EU Directive 67/548/EEC. The usual precautionary measures for dealing with chemicals should be observed. On contact with strong acids, hydrogen sulphide is produced. |                                     |   |                   |              |                  |                  |
| <b>4. First Aid Measures -</b>   |                                     |   |                   |              |                  |                  |
| - General Information  | :                                   | No special measures required.                                     |                   |              |                  |                  |
| - On inhalation  | :                                   | If inhaled move to fresh air, aid in breathing. If necessary, get |                   |              |                  |                  |



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| - On skin contact                                | : Wash affected skin with soap and water.  |
| - On contact with eyes                           | : Flush eyes with plenty of flowing water. If irritation develops consult oculist.   |
| - On ingestion                                   | : If swallowed, rinses mouth and then drink plenty of water. Dilute with water and induce vomiting. Get immediate medical attention.   |
| <b>5. Fire Fighting Measures -</b>               |  |
| - Suitable extinguishing agent/s                 | : Water mist, extinguishing powder and CO <sub>2</sub>   |
| - Special exposure hazards                       | : After combustion likely chances of gases like oxides of Carbon, Cadmium, Zinc, sulphur and Nitrogen.   |
| - Special Protective equipment for fire-fighters | : Wear self contained breathing apparatus and wear full protective suit.   |
| <b>6. Accidental Release Measures -</b>          |  |
| - Person related safety precautions              | : Do not ingest or breathe in. Avoid contact with eyes and skin.   |
| - Measures for environmental protection          | : Prevent contamination of drains, surface waters, and soil. Pigment is generally insoluble in water.  |
| - Method for cleaning up / collecting            | : Collect mechanically. Dispose off contaminated material as waste according to item 13. Clean accident area carefully. Use warm water and cleaning agent.                     |
| <b>7. Handling and Storage -</b>                 |  |
| - Handling                                       | : Prevent formation of dust. Take precautionary measure against electrostatic charges – Earthing is necessary during loading operation. Avoid exposure to open flame or spark. |



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| - Storage      | : | <ol style="list-style-type: none"> <li>1) A moderately dry, well-ventilated area is considered to be adequate for handling and storage.</li> <li>2) Use proper personal equipment during handling.</li> <li>3) Protect from extreme heat and cold. Keep away from sources of ignition. Avoid dust formation.</li> </ol> |
| - Specific Use | : | Used as colouring matter in paints, printing inks and plastics.   |

### 8. Exposure Controls and Personal Protection -

- |   |   |  |
|---|---|--|
| - Additional information about design of technical system | : | No further data. (see Sr. No. 7)   |
| - Exposure limit values                                   | : | 15 µg Cd/l urine<br>1.5 µg Cd/100ml blood  |
| - Personal protective equipments                          | : | Use safety goggles, aprons and gloves.   |
| - General protective and hygienic measures                | : | The usual precautionary measures should be adhered to in handling the chemicals. |
| - Breathing equipment                                     | : | Use air purifying equipment  |
| - Hand protection   | : | Wear rubber gloves.  |
| - Eye protection  | : | Wear safety goggles or safety glasses.   |
| - Skin protection   | : | Impervious clothing.   |

### 9. Physical and Chemical Properties -

- |                                      |   |                |
|--------------------------------------|---|----------------|
| - Form                               | : | Powder         |
| - Colour                             | : | Yellow         |
| - Smell                              | : | Odorless       |
| - pH (10g / 250 ml H <sub>2</sub> O) | : | 5 – 8          |
| - Boiling point / Boiling range      | : | Not applicable |
| - Melting point / Melting range      | : | Not applicable |
| - Flash point                        | : | Not applicable |



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| - Ignition temperature                    | : Not known  |
| - Flammability                            | : Not applicable   |
| - Organic Solvents                        | : EU/VOC 20°C : 0%   |
| - Danger of explosion                     | : Product is not explosive. However, formation of air / dust mixture is dangerous.   |
| - Oxidizing property                      | : Not applicable   |
| - Vapour pressure                         | : Not applicable   |
| - Relative density                        | : 4.6  |
| - Water solubility                        | : Insoluble  |
| - Solvent solubility                      | : Insoluble  |
| - Partition coefficient(n-Octanol/Water): | : Not applicable   |
| - Viscosity                               | : Not applicable   |
| - Vapour density                          | : Not applicable   |
| - Evaporation rate                        | : Not applicable   |
| - Auto ignition temperature               | : Not known  |
| <b>10. Stability and Reactivity -</b>     |  |
| - Stability of product                    | : This product is stable under normal storage condition.   |
| - Dangerous reaction                      | : Risk of dust explosion.  |
| - Materials to avoid                      | : Exposure to strong acids, bases and oxidizing agents should be avoided, which otherwise will generate hydrogen sulphide. |
| - Dangerous product of decomposition      | : Toxic gases like SO <sub>2</sub> / vapors may evolve.  |
| <b>11. Toxicological Information -</b>    |  |
| - Acute toxicity                          | : LD50/oral/rat - ≥ 5000 mg/kg   |
| - Primary irritant effect -               |  |
| on the skin                               | : Not irritating   |
| on the eyes                               | : Not an eye irritant  |



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- Sensitisation : No sensitization. May cause skin sensitization to specially sensitive person.
- Mutagenicity : No mortality was observed in an inhalation study in which rats inhaled Cadmium Pigment at 100mg/m<sup>3</sup> (As Cd) for 2 hours.
- Additional toxicology information : When used and handled according to specification, the product does not have any harmful effects according to our experience and available information.

### 12. Ecological Information -

- Other information : Due to insolubility of the product in water a biodegradation is not likely.
  - Behaviour in environmental system :
  - Ecotoxicological effects -
    - Toxicity to fish : Data not available
    - Toxicity to daphnids (acute): Data not available
  - AOX indication : Not applicable
- (Remark – The product is anticipated to be substantially removed by mechanical treatment)
- Mobility -
    - Surface tension : Not applicable
    - Absorption : Not applicable
    - Desorption : Not applicable
  - Persistence & Degradability : This pigment is considered to be generally insoluble in water, biodegradability is not likely.
  - Bioaccumulative potential : Not known

### 13. Disposal Information -

- Consult local expert for advice on the disposal.
- Waste disposal should be carried according to local and state regulation.

### 14. Transport Information -



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|   |                                  |
|---|----------------------------------|
| - UN No.  | : None                           |
| - GGV IMDG Code                                 | : None                           |
| - RID / ADR                                     | : None                           |
| - ICAO / IATA-DGR                               | : None                           |
| - Custom Tariff No.                             | : 32063000                       |
| <b>15. Regulatory Information -</b>             |                                  |
| - Designation according to EC guidelines        | : Not classified as “dangerous”. |
| - Code letter and hazard designation of product | : Not classified as “dangerous”. |
| <b>16. Other Information -</b>                  |                                  |
| - Department issuing material safety            |                                  |



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### **Environmental Concerns -**

Cadmium pigments are insoluble, even in dilute acids. The insolubility is further enhanced when the pigments are incorporated into polymers, typically at a 1 % loading. Pigments and pigmented articles are considered to be safe for landfill disposal. In a study of municipal solid waste incinerators (10), the cadmium concentrations found in ash leachates were below the maximum specified for drinking water in the USA. Incineration of polymers pigmented with up to four times the usual concentration of cadmium showed that these products have no significant impact on incinerator emissions (11). Cadmium and its compounds have been classified as List 1 substances in EU-Directive 76/464/EEC relating to pollution of the aquatic environment, and E.U. member states are required to take special measures to control all discharges of cadmium, including cadmium pigments.

The European Directive 91/338/EEC restricts the use of cadmium pigments in certain polymers, depending on the purpose of use. In 1996 use in coating media was prohibited. Use in artists' colours and ceramic products is still permitted. There is no restriction on the use of cadmium pigments for toys, providing that the pigmented article meets the European standard EN 71 part 3. Cadmium pigments may be used in food contact polymers provided that the cadmium pigments satisfy the purity standards in the different European states. The standard for soluble cadmium is 0.01 % by weight.

### **Information -**

We have described our product concerning possible safety requirements by the above mentioned information given to the best of our knowledge and experience. All data given are never meant to guarantee any quality description nor product properties.