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## GARNET FOR FILTRATION SYSTEM

Almandite garnet is a high hardness, high density granular filter media. It can be used extremely effectively as the lower strata in a dual media filter bed. Its high specific gravity as well as its chemical and abrasive resistance makes almandite garnet ideal for filtration. An effective multi-media filter system will utilize larger sized media on top to filter out the larger particulates and smaller sized media to filter out the smaller particulates. Garnet, with its high density, is heavier than most other filter media. Garnet's higher density provides stability within your dual media bed, allowing the filter sized garnet to filter down to 10 – 20 micron particulates

### Mineral Composition

|                          |                |
|--------------------------|----------------|
| Garnet (Almandite) ..... | 98%            |
| Ilmenite .....           | less than 1.5% |
| Others.....              | less than 0.5% |

### Average Chemical Composition

|                                      |       |
|--------------------------------------|-------|
| SiO <sub>2</sub> .....               | 36%   |
| Al <sub>2</sub> O <sub>3</sub> ..... | 20%   |
| FeO .....                            | 30%   |
| Fe <sub>2</sub> O <sub>3</sub> ..... | 2%    |
| TiO <sub>2</sub> .....               | 0.66% |
| MnO .....                            | 0.45% |
| CaO .....                            | 8.30% |
| MgO .....                            | 9.73% |

### Characteristics

|                        |                           |
|------------------------|---------------------------|
| Bulk Density .....     | 2.3-2.7 MT/m <sup>3</sup> |
| Specific Gravity ..... | 4.1 - 4.4                 |
| Hardness (Moh) .....   | 7.5 - 8                   |
| Melting Point .....    | 1260°C                    |
| Grain Shape .....      | Sub- angular              |
| Conductivity .....     | 10- 25 mS/m               |
| Appearance .....       | Reddish Purple            |
| Chlorides .....        | max 25ppm                 |
| Solubility .....       | Insoluble                 |

### Operational Specifications

|                          |                              |
|--------------------------|------------------------------|
| Bed depth:               | 3 – 12 in.                   |
| Freeboard:               | 40 – 50% of bed depth (min.) |
| Service flow rate:       | 3 – 5 gpm/sq. ft.            |
| Backwash flow rate:      | 15 – 20 gpm/sq. ft.          |
| Backwash expansion rate: | 30% of the bed depth         |

### Packing Information

|           |                                                               |
|-----------|---------------------------------------------------------------|
| Origin    | : India / China                                               |
| Packing   | : In 25 kg or 12.5 liters per bag<br>In 1000 kg per Jumbo Bag |
| Mesh Size | : #30/60, #20/40, #12/25, #8/12                               |



**SOLVE FLOW SDN BHD** (213943-K)

|                                                                                         |                                |
|-----------------------------------------------------------------------------------------|--------------------------------|
| 31-2, Jalan Radin Anum Dua, Bandar Baru Sri Petaling, 57000 Kuala Lumpur, West Malaysia |                                |
| Tel : +603-9057 2684 / +016-666 9978                                                    | Fax : +603-9057 2699           |
| Email : enquiry@solveflow.com.my                                                        | Website : www.solveflow.com.my |