

VVF (India) Limited

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MATERIAL SAFETY DATA SHEET

| Product Name | VEGAROL [®] 1218 | |
|----------------|---------------------------|--|
| <u>Version</u> | 2.00 | Date : September 25 th , 2012 |

| 1. CHEMICAL PRODUCT IDENTIFICATION | | |
|------------------------------------|--|--|
| 1.1 Product Name | VEGAROL [®] 1218 | |
| 1.2 Common Chemical Name | Blend of lauryl myristyl alcohol, cetyl alcohol, stearyl | |
| | alcohol, Blend of N-dodecanol, tetra decanol, 1-hexa | |
| | decanol, & 1-octadecanol; Fatty Alcohol C12-18 | |
| 1.3 Product code (Supplier) | VEGAROL [®] 1218 | |

| 2. COMPOSITION / INFORMATION ON INGREDIENTS | | |
|---|---|--|
| Chemical Name: | Blend of 1-dodecanol (Lauryl Alcohol), 1-Tetrea decanol (Myristyl Alcohol), 1-Hexadecanol (Cetyl Alcohol) &1-Octadecanol (Stearyl alcohol). | |
| % Compound | 100 | |
| CAS Number | 67762-25-8 | |
| EINECS Number | 267-006-5 | |

| 3. HAZARD IDENTIFICATION | | |
|---|---|--|
| 3.1 Environmental Hazards | None Identified | |
| 3.2 Human Health Hazards Effect & symptoms: | | |
| 3.3 Ingestion | May cause slight irritation to gastrointestinal tract | |
| 3.4 Inhalation | No harmful effect expected at ambient temperature. | |
| | Mist/vapours could be irritant to pulmonary tract. | |
| 3.5 Skin Contact | Slight irritant. | |
| 3.6 Eye Contact | Mild transient irritant. | |

| 4. FIRST AID MEASURES | |
|-----------------------|---|
| 4.1 Ingestion | Consult a doctor immediately. Drink plenty of water. Do not give |
| | anything to unconscious person. |
| 4.2 Inhalation | Remove to fresh air immediately. In case of breathing difficulty try |
| | artificial respiration. Get medical attention at earliest. |
| 4.3 Skin Contact | Wash material off the skin with copious amounts of soap and water. If |
| | redness or itching persist seek medical attention |
| 4.4 Eye Contact | Wash eyes with water for at least 15 minutes. If redness or itching |
| | persist seek medical attention |

| 5. FIRE FIGHTING MEASURES | | |
|---------------------------|---|--|
| 5.1 Extinguishing Media | | |
| a. Suitable | Carbon dioxide, dry chemical, water fog, foam | |
| | Carbon dioxide or foam | |
| b. Not Suitable | Water | |



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| 5. FIRE FIGHTING MEASURES | |
|-------------------------------------|---|
| c. Special Fire fighting Procedures | Wear self-contained breathing apparatus and |
| | protective clothing to avoid direct contact with eyes |
| | and skin. In case of high temperature or fire, use a |
| | water jet to cool the tank containing the product |
| 5.2 Unusual Fire /Explosion Hazards | None |
| 5.3 Hazardous Thermal | On decomposition, the product releases Carbon |
| decomposition | dioxide, Carbon monoxide, hydrocarbons, soot, |
| | aldehydes and ketones |
| 5.4 Protection of Fire-fighters | Self contained breathing apparatus and protective |
| | clothing face mask and rubber boots. |

| 6. ACCIDENTAL RELEASE MEASURES | | |
|--------------------------------|--|--|
| 6.1 Personal Precautions | No particular precautions. Observe all Standard Industry | |
| | Measures | |
| 6.2 Environmental Precautions | In case of spillage, cover the spilt amount with sand or soil to absorb the product. Then, collect the sand or soil with the product absorbed into a suitable container and dispose. Prevent entry of product into drains and ground water | |
| 6.3 Method of cleaning up | Cover the product with dry earth or sand so that it may be absorbed. Then, transfer into a container for disposal. | |
| | Flush affected area with water | |

| 7. HANDLING AND STORAGE | | |
|-----------------------------------|--|--|
| 7.1 Handling | Follow good hygiene and safety procedures. Avoid | |
| | any direct contact with the product. Wash hands with | |
| | soap and water after handling the product. Keep away | |
| | from heat, strong acids and oxidising agents | |
| 7.2 Storage | Store in sealed containers in a cool and dry place. | |
| | Away from source of heat. | |
| 7.3 Suitable Packing Materials | HDPE carbuoys, stainless steel tanks, Zink coated | |
| | tanks or lacquer lined MS drums | |
| 7.4 Not suitable Packing Material | Unlined MS drums | |

| 8. EXPOSURE CONTROLS / PERSONAL PROTECTION | | |
|--|---|--|
| 8.1 Respiratory System protection | No protection required when adequate ventilation is available at room temperature. In presence of mist or vapour use self-contained NIOSH/MSHA approved respirator | |
| 8.2 Skin and body protection | Uniform, apron and rubber boots. | |
| 8.3 Hand protection | Rubber gloves | |
| 8.4 Eye protection | Safety goggles, face mask | |

| 9. PHYSICAL AND CHEMICAL PROPERTIES | | |
|-------------------------------------|------------------------------------|--|
| 9.1 Physical state | Liquid above 30 ^o C | |
| 9.2 Colour | Colourless | |
| 9.3 Odour | Characteristic fatty alcohol odour | |
| 9.4 Boiling range, | 255 to 340, ⁰ C | |



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| 9. PHYSICAL AND CHEMICAL PROPERTIES | | | |
|--|--------|---|--|
| 9.5 Melting Range, 18 to 2 | | 28 °C | |
| | | ble in water | |
| 9.7 Density, Gm/ml | 0.820 | to 0.830 at 40 0 C | |
| 9.7 Solubility oil and solvents | Not av | vailable | |
| 9.8 Vapour density ($Air = 1$) | Not av | vailable | |
| 9.9 Vapour pressure, mm of Hg < 10 n | | nm, at 22 °C | |
| | | x 137 °C,PMCC | |
| 9.11 Auto ignition temperature, Not av | | vailable | |
| 9.12 Lower explosion limit, Not av | | vailable | |
| 9.13 Upper explosion limit, | Not av | vailable | |
| 9.14. Average molecular weight 200-2 | | 15 | |
| 9.15. Viscosity ~ 10 n | | nPa.s at 38 °C | |
| 10 STABILITY AND REACTIVITY | | | |
| 10.1 Chemical stability | | Stable under normal operational condition | |
| 10.2 Conditions to avoid | | Sources of heat, ignition & flame. | |
| 10.3 Materials to avoid | | Strong acids and oxidising agents | |
| 10.4 Hazardous polymerisation products | | None | |
| 10.5Hazardous Decomposition Products | | Carbon monoxide & Carbon dioxide | |

| 11. TOXICOLOGICAL INFORMATION | |
|-------------------------------|--|
| 11.1 Acute Toxicity | |
| 11.1.1 Oral (LD50) (Rat) | > 20.5 g/Kg |
| 11.1.2 Dermal (LD50) (Rabbit) | Not available |
| 11.1.3 Inhalation (LC50) | Not available |
| 11.2 Skin irritation | No irritation in human being observed in repeated |
| | insult test done using undiluted product. |
| 11.3 Eye irritation | Mild transient irritation. Mild irritation observed in |
| | rabbits at 500 mg dosage level of undiluted product |
| 11.4 Sensitisation | Not available |
| 11.5 Chronic Toxicity | Not available |
| 11.6 Carcinogenicity | Not available |

| 12. ECOLOGICAL INFORMATION | |
|----------------------------|--|
| 12.1 Comment | This product is very easily biodegradable (90%) and does not cause difficulties in waste water treatment plants. Since it is insoluble in water and lighter than water, large amounts of contamination can be separated using standard oils and fats separators. |
| 12.2 Eco toxicity | Data not available. |

| 13 DISPOSAL CONSIDERATIONS | |
|----------------------------|--|
| 13.1 Methods of Disposal | Disposal methods to be in accordance with local, federal and |
| | state environmental regulations |

| 14.TRANSPORT INFORMATION | |
|--------------------------|------------------------------------|
| 14.1 Land Road / Railway | |
| 14.11 ADR/RID class | Chemicals N. O. S. (non regulated) |



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| 14.12 ADR/RID item Number | Chemicals N. O. S. (non regulated) |
|-------------------------------------|-------------------------------------|
| 14.2 Inland waterways | |
| 14.21 ADNR class | Chemicals N. O. S. (non regulated |
| 14.3 Sea | |
| 14.31 IMDG class | Chemicals N. O. S. (non regulated) |
| 14.32 IMDG Page Number | Chemicals N. O. S. (non regulated) |
| 14.4 Air | |
| 14.41 IATA-DGR class | Chemicals N. O. S. (non regulated) |
| 14.5 National Transport Regulations | Chemicals N. O. S. (non regulated) |

| 15. REGULATORY INFORMATION | | |
|----------------------------|---|--|
| 15.1 EC - Regulations | This product is not classified as dangerous according to EEC | |
| | directive | |
| 15.2 Others | According to available data fatty alcohol is not a dangerous | |
| | chemical. How ever one should observe the usual precautionary | |
| | measures for dealing with chemicals according to local, state and | |
| | federal regulation & requirements. | |

| 16. OTHER INFORMATION | | |
|--------------------------------|--|--|
| 16.1 REACH pre-registration no | - | |
| 16.2Legend | N. A. = Not applicable; N.Av. = Not available | |
| 16.3 History | | |
| a. Date of first issue | July 20 th , 2004 | |
| b. Date of last issue | September 25 th 2010 | |
| c. Date of current issue | September 25 th 2012 Version : 2.00 | |
| MSDS Authorised By | Dr. Kashinath Pandit | |

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