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MATERIAL SAFETY DATA SHEET

Product Name: Vegarol® 1698	Version: 1.03	Date: May 25, 2009

1. CHEMICAL PRODUCT IDENTIFICATION	
1.1 Product Name	Vegarol® 1698
1.2 Common Chemical Name	Cetyl alcohol, 1-hexadecanol, hexadecan-1-ol
1.3 Product Code (Supplier)	Vegarol® 1698

2. COMPOSITION / INFORMATION ON INGREDIENTS	
2.1 Chemical Name	Cetyl alcohol, hexadecan-1-ol
2.2 % Compound	100
2.3 CAS Number	36653-82-4
2.4 EINECS Number	253-149-0

3. HAZARD IDENTIFICATION	
3.1 Environmental Hazards	None Identified
3.2 Human Health Hazards, Effects, and Symptoms:	
a. Ingestion	May cause slight irritation to gastrointestinal tract
b. Inhalation	No harmful effect expected at ambient temperature. Mist or vapours could cause irritation to the pulmonary tract
c. Skin Contact	Causes slight irritation
d. Eye Contact	May cause mild transient irritation

4. FIRST AID MEASURES	
4.1 Ingestion	Consult a doctor immediately. Drink plenty of water. However, if the person is unconscious, do not provide any type of ingestion
4.2 Inhalation	Remove to fresh air immediately. In case of breathing difficulty try artificial respiration. Get medical attention as soon as possible
4.3 Skin Contact	Wash material off the skin with plenty of soap and water. If redness or itching persists, seek medical attention
4.4 Eye Contact	Wash eyes with water for at least 15 minutes. If redness or itching persists, seek medical attention

5. FIRE FIGHTING MEASURES	
5.1 Extinguishing Media	
a. Suitable	Carbon dioxide, dry chemical, water fog, or foam
b. Not Suitable	Water
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 or Explosion Hazards	None

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5. FIRE FIGHTING MEASURES	
5.3 Hazardous Thermal Decomposition	On decomposition, the product releases carbon dioxide, carbon monoxide, hydrocarbons, soot, aldehydes and ketones
5.4 Protection for Fire-Fighters	Self-contained breathing apparatus, protective clothing and a face mask

6. ACCIDENTAL RELEASE MEASURES	
6.1 Personal Precautions	Wear chemical safety goggles, a respirator, rubber boots and protective clothing covering the entire body
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 absorbed product into a suitable container and dispose. Prevent entry of product into drains and ground water
6.3 Clean Up Method	Mop up and collect the product in a dry container for disposal. Wash area with water. Use non-sparking tools

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 sources of heat and direct sun light
7.3 Suitable Packing Materials	HDPE carbuoys and stainless steel tanks. For pastille form, use craft paper bags with liners or poly bags
7.4 Unsuitable 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 vapours, use self-contained NIOSH/MSHA approved respirator
8.2 Skin and Body Protection	Uniform, apron and rubber boots. Take a shower if the product comes in contact with skin
8.3 Hand Protection	Rubber gloves
8.4 Eye Protection	Safety goggles and a face mask. Keep a source of water ready in case the product comes into contact with eyes

9. PHYSICAL AND CHEMICAL PROPERTIES	
9.1 Physical State	Liquid above 60^0C
9.2 Colour	Colourless
9.3 Odour	Practically no odour
9.4 Boiling Range	305 - 330
9.5 Melting Range	46^0C - 50^0C
9.6 Water Solubility	Insoluble in water

9.7 Relative Density	0.815 at 60^{0}C
9.7 Solubility Oil and Solvents	Not available
9.8 Vapour Density (Air = 1)	Not available
9.9 Vapour Pressure, mm of Hg	< 10 mm, at 22^{0}C
9.10 Flash Point	Approximately 180^{0}C, PMCC
9.11 Auto Ignition Temperature	Not available
9.12 Lower Explosion Limit	Not available
9.13 Upper Explosion Limit	Not available
9.14. Average Molecular Weight	238 - 249

10. STABILITY AND REACTIVITY	
10.1 Chemical Stability	Stable under normal operational conditions
10.2 Conditions to Avoid	Sources of heat, ignition and flame
10.3 Materials to Avoid	Strong acids and oxidising agents
10.4 Hazardous Polymerisation Products	None
10.5 Hazardous Decomposition Products	Carbon monoxide and carbon dioxide

11. TOXICOLOGICAL INFORMATION	
11.1 Acute Toxicity:	
a. Oral (LD50) (Rat)	> 5000 mg/kg
b. Dermal (LD50) (Rabbit)	> 5000 mg/kg
c. Inhalation (LC50)	Not available
d. Skin Irritation	No irritation in human beings observed through repeated insult tests conducted using undiluted product. Slight irritation observed in rabbits (Draiz Test, 24 hour exposure)
e. Eye Irritation	Slight irritation observed in rabbits
f. Sensitisation	Not sensitized (guinea pig maximization test)
g. Chronic Toxicity	Not available
h. 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. Being 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 should be in accordance with local, federal and state environmental regulations

14.TRANSPORT INFORMATION	
14.1 UN Number	
14.2 Land Road / Railway	
14.21 ADR/RID Class	Chemicals N. O. S. (non regulated)

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14.22 ADR/RID Item Number	Chemicals N. O. S. (non regulated)
14.3 Inland Waterways	
14.31 ADNR Class	Chemicals N. O. S. (non regulated)
14.4 Sea	
14.41 IMDG Class	Chemicals N. O. S. (non regulated)
14.42 IMDG Page Number	Chemicals N. O. S. (non regulated)
14.5 Air	
14.51 IATA-DGR Class	Chemicals N. O. S. (non regulated)
14.6 National Transport Regulations	Chemicals N. O. S. (non regulated)

15. REGULATORY INFORMATION	
15.1 EEC Regulations	This product is not classified as dangerous according to the EEC directive
15.2 Others	According to available data, fatty alcohol is not a dangerous chemical. One should, however, observe the usual precautionary measures for dealing with chemicals according to local, state and federal regulations and requirements R phrases = None, S phrases = None

16. OTHER INFORMATION		
16.1 REACH Pre-Registration Number	05-2115237306-52-0000	
16.2 Legend	Not applicable, not available	
16.3 History:		
a. Date of First Issue	July 20, 2004	
b. Date of Last Issue	January 25, 2009	
c. Date of Current Issue	May 25, 2009	Version: 1.03
MSDS Prepared By	Dr. Kashinath Pandit	
MSDS Authorized By	Dr. Kashinath Pandit	

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