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Technical Data Sheet

Cetyl alcohol

Product Information

Chemical Name	Cetyl alcohol
CAS #	36653-82-4
EINECS	253-149-0
Formula	C ₁₆ H ₃₄ O
Molecular Weight	242.44
Synonyms	Palmityl alcohol; 1-Hexadecanol
Chemical Structure	



Description

Cetyl alcohol, a white crystalline form, is insoluble in water under ambient conditions, but it is soluble in solvents such as acetone, ethanol, ethyl ether, isopropyl alcohol and trichloroethylene. Cetyl alcohol, composed of C16(98% min), is a waxy white solid under ambient conditions with a mild soapy odor. Additionally, cetyl alcohol is one kind of inert chemical material whose chemical property is very stable in common conditions.

Physical Properties

(all properties @ 22°C (72°F), 760mmHg unless stated)

Equivalent Weight:	246
Specific Gravity:	0.81 @ 55/25°C
Vapor Pressure:	< 1mmHg
Melting Point:	124°F (51°C)
Viscosity:	9cp @ 63°C
Specific Heat:	0.47 cal/g. °C
Boiling Point:	>245°C

Specification

Items	Units	Results	Items	Units	Results
Appearance	/	White crystalline	C6	%	/
Melting point	°C	50.60	C8	%	/
Color	Hazen	20	C10	%	/
Acid value	mgKOH/g	0.05	C12	%	/
Saponification value	mgKOH/g	0.27	C14	%	0.12
Hydroxyl value	mgKOH/g	229.85	C16	%	99.33
Lodine value	g/I2/100g	0.52	C18	%	0.04
Moisture	%	/	C20	%	/
Main components	%	99.33	RH	%	0.29
Alkane	%	0.29	Other contents	%	0.22
Carbonyl value	ppm		/	/	/

Safety

This product is not regulated as a hazardous substance either in packing group or shipping. Disposal must be made according to local and national regulations. Avoid to contact eyes since it may cause serious eye damage. It may cause allergy or asthma symptoms or breathing difficulties if inhaled. It may cause an allergic skin reaction if on skin. Always refer to the Material Safety Data Sheet (MSDS)

Applications

The applications of Cetyl alcohol is for alkyl amines, aluminum rolling lubricants, tertiary amines, antioxidants, concrete anti-spalling agents, cosmetics, defoamers, ethoxylates, halides/mercaptans, lubricant oil additives, methacrylates, phosphated alcohols, plasticizers, plastic lubricants/mold release, polymerization stabilizers, sulphation, sulfated ethoxylates, and epoxy resin diluent.

Cosmetics application: cetyl alcohol can be used for the production of cosmetic raw material. It has strong penetration into our skin so that it is widely used as a main component in many cosmetics. As the raw material of cosmetics, the cetyl alcohol can come from natural alcohol and also from animal oil. And even, the one from animal oil used in cosmetics can be more exquisite and tender in the actual use. However, our main raw material is from crude palm kernel oil.

Pharmaceutical application: cetyl alcohol is used as the ointment substrate in pharmaceutical purpose. It helps the active ingredients to penetrate into our skin so that the curative effect is achieved.

Food additives: cetyl alcohol, a kind of natural fatty alcohol, can be directly eaten. Now, cetyl alcohol is applied into more and more food stuff and desserts to rich their tastes. Used in the food production, it helps enhance food flavor and color.

Packaging

25kg per woven bag, 640 bags(16 tons) per 20" container without pallets; It can be loaded 15 tons if palletted.
25kg water-proof kraft paper sack, 560 bags(14tons)per 20" container without pallets.

Shelf Life

TNJ stored flaked Cetyl Alcohol and Stearyl Alcohol in bags. Flaked cetyl and stearyl alcohol is stable under normal storage conditions for at least three years. No specific data has been collected for the shelf-life of opened containers of alcohol.

Storage & Handling

Storage Temp Targets: 135-140°F (57-60°C)
Handling Temp Min-Max: 135-145°F (57-63°C)
Sensitive Properties: Carbonyl, Color
Max Steam, psig: 30
Nitrogen Blanket: YES (4 to 8 oz. of pressure)
Load out filter: 1 micron
Rail Car or Tank Truck: Lined or Stainless Steel
Agitation/Recirculation: Yes
Storage Tank: Lined Carbon Steel or Stainless Steel
Pumps and Lines: Carbon Steel.

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