

## LAURIC ACID

GHS Safety Data Sheet

Version No:3

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### Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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#### PRODUCT NAME

LAURIC ACID

#### OTHER NAMES

C12-H24-O2, CH<sub>3</sub>(CH<sub>2</sub>)<sub>10</sub>COOH, "dodecanoic acid", "n-dodecanoic acid",  
"laurostearic acid", "1-undecanecarboxylic acid"

#### PRODUCT USE

Used in soaps, detergents, as wetting agents, alkyd resins, cosmetics  
and food additives.

#### SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

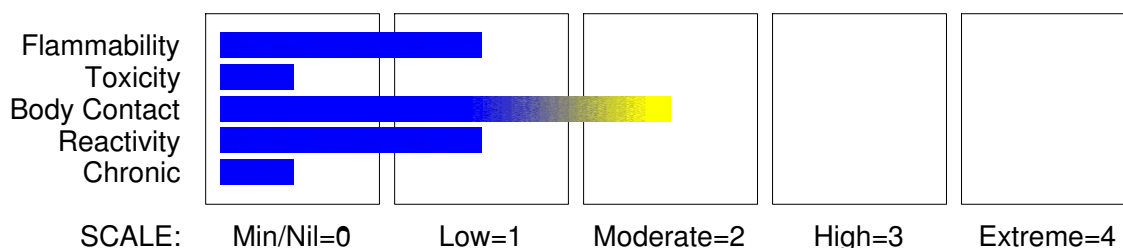
technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

#### HAZARD RATINGS



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### Section 2 - HAZARDS IDENTIFICATION

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#### GHS Classification

Eye Irritation Category 2B

Skin Corrosion/Irritation Category 3

continued...

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## Section 2 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

#### HAZARD

WARNING

Determined by using GHS criteria:

H316 H320

Causes mild skin irritation

Causes eye irritation

#### PRECAUTIONARY STATEMENTS

##### Prevention

Wash hands thoroughly after handling.

##### Response

If eye irritation persists, get medical advice/attention.

If skin irritation occurs, seek medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
lauric acid	143-07-7	>99
may contain traces of trans- stilbene	103-30-0	

## Section 4 - FIRST AID MEASURES

### SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

### EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - If pain persists or recurs seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.

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Section 4 - FIRST AID MEASURES

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- Other measures are usually unnecessary.

## NOTES TO PHYSICIAN

Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Combustible solid which burns but propagates flame with difficulty.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
- Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
- Build-up of electrostatic charge may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.
- All movable parts coming in contact with this material should have a speed of less than 1-meter/sec.

Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

May emit corrosive fumes.

### FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

### Personal Protective Equipment

Gloves, boots (chemical resistant).

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Sweep up, shovel up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

#### MAJOR SPILLS

Moderate hazard.

- CAUTION: Advise personnel in area.
- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.
- Recover product wherever possible.
- IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal.
- ALWAYS: Wash area down with large amounts of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise Emergency Services.

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### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.

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## Section 7 - HANDLING AND STORAGE

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- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### SUITABLE CONTAINER

Multi-ply paper bag with sealed plastic liner or heavy gauge plastic bag.

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse. Check that all containers are clearly labelled and free from leaks. Packing as recommended by manufacturer.

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

### STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents.  
Avoid strong acids, bases.

### STORAGE REQUIREMENTS

Observe manufacturer's storing and handling recommendations.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

The following materials had no OELs on our records

- lauric acid: CAS:143- 07- 7 CAS:8000- 62- 2 CAS:8045- 27- 0  
CAS:7632- 48- 6 CAS:203714- 07- 2
- trans- stilbene: CAS:103- 30- 0

### MATERIAL DATA

These "dusts" have little adverse effect on the lungs and do not produce toxic effects or organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:

- the architecture of the air spaces remain intact,
- scar tissue (collagen) is not synthesised to any degree,
- tissue reaction is potentially reversible.

Extensive concentrations of P.N.O.C.s may:

- seriously reduce visibility,
- cause unpleasant deposits in the eyes, ears and nasal passages,
- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

This limit does not apply:

continued...

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- to brief exposures to higher concentrations
- nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.

This exposure standard applies to particles which

- are insoluble or poorly soluble\* in water or, preferably, in aqueous lung fluid (if data is available) and
- have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload).

### INGREDIENT DATA

#### TRANS-STILBENE:

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- contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]

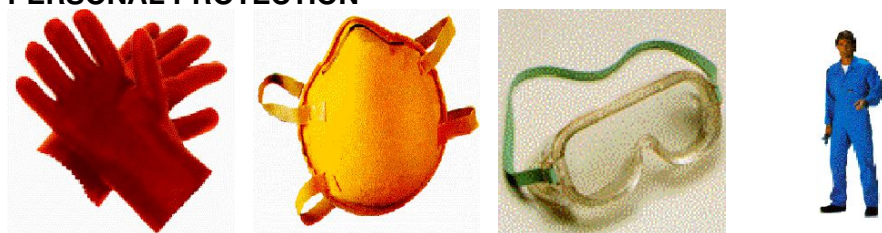
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### PERSONAL PROTECTION



### EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure,

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

### HANDS/FEET

Suitability and durability of glove type is dependent on usage. Factors such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity,

are important in the selection of gloves.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocautchouc
- polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

### RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

\* - Negative pressure demand \*\* - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult

your

Occupational Health and Safety Advisor.

### ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
  - (a): particle dust respirators, if necessary, combined with an absorption cartridge;
  - (b): filter respirators with absorption cartridge or canister of the right type;
  - (c): fresh-air hoods or masks

continued...

# LAURIC ACID

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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- Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to efficiently remove the contaminant.

Type of Contaminant:

direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)  
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

Air Speed:

1- 2.5 m/s (200- 500 f/min.)

2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4-10 m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

Colourless, needle-like crystals or powder, with a slight odour of bay oil. Insoluble in water, but soluble in benzene, alcohol, ether and petroleum ether. Combustible. Occurs as a fatty acid in many vegetable fats as its glyceride.

### PHYSICAL PROPERTIES

Solid.  
Does not mix with water.  
Floats on water.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Molecular Weight: 200.36  
Melting Range (°C): 44- 46  
Solubility in water (g/L): Immiscible  
pH (1% solution): Not applicable.  
Volatile Component (%vol): Not available.  
Relative Vapour Density (air=1): Not available.  
Lower Explosive Limit (%): Not available.  
Autoignition Temp (°C): Not available.  
State: Divided solid

Boiling Range (°C): 225 (100 mm Hg)  
Specific Gravity (water=1): 0.883  
pH (as supplied): Not applicable  
Vapour Pressure (kPa): 0.13 @ 121C  
Evaporation Rate: Not available  
Flash Point (°C): >113  
Upper Explosive Limit (%): Not available.  
Decomposition Temp (°C): Not available.  
Viscosity: Not Available

log Kow : 4.53-4.81

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

Product is considered stable and hazardous polymerisation will not occur.

## Section 11 - TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

##### EYE

Limited evidence or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

##### SKIN

The material may produce mild skin irritation; limited evidence or practical experience suggests, that the material either:

- produces mild inflammation of the skin in a substantial number of individuals following direct contact, and/or
- produces significant, but mild, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.

Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (non allergic). The dermatitis is often characterised by

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# LAURIC ACID

## Section 11 - TOXICOLOGICAL INFORMATION

skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

### INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

### CHRONIC HEALTH EFFECTS

Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray.

Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Since lauric acid is a common constituent of many vegetable fats, it is regarded as non toxic via ingestion, but large amounts may produce gastrointestinal upset. [Patty]

### TOXICITY AND IRRITATION

#### TOXICITY

Oral (rat) LD50: 12000 mg/kg

Intravenous (Mouse) LD50: 131 mg/kg

#### IRRITATION

Skin (rabbit): 500 mg - Mild

Eye (rabbit): 100 mg - Mild

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

#### TRANS-STILBENE:

#### TOXICITY

Oral (mouse) LD50: 920 mg/kg

Intraperitoneal (mouse) LD50: 6500 mg/kg

#### IRRITATION

Nil Reported

## Section 12 - ECOLOGICAL INFORMATION

log Pow (Verschuereen 1983): 4.2

Toxicity Fish: TLm(96)0.9-1.37mg/L  
Refer to data for ingredients, which follows:

#### TRANS-STILBENE:

log Kow : 4.53-4.81

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## Section 13 - DISPOSAL CONSIDERATIONS

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- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: Burial in a licenced land-fill or Incineration in a licenced apparatus (after admixture with suitable combustible material)
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

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## Section 14 - TRANSPORTATION INFORMATION

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HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,  
IMDG

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## Section 15 - REGULATORY INFORMATION

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### REGULATIONS

lauric acid (CAS: 143-07-7) is found on the following regulatory lists;  
International Council of Chemical Associations (ICCA) - High Production Volume List  
OECD Representative List of High Production Volume (HPV) Chemicals

No data available for lauric acid as CAS: 8000-62-2, CAS: 8045-27-0, CAS: 7632-48-6, CAS:  
203714-07-2.

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## Section 16 - OTHER INFORMATION

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### Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
trans- stilbene	103- 30- 0	Xn; R22 N; R50/53

### INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
lauric acid	143- 07- 7, 8000- 62- 2, 8045 - 27- 0, 7632- 48- 6, 203714- 07- 2

The above information is believed to be accurate and represent the best information

continued...

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## Section 16 - OTHER INFORMATION

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currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 5-Jul-2018