Registered office: Godrej One, Pirojshanagar, Eastern Express Highway, Vikhroli, Mumbai 400 079, India.

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E-mail: rv.dubhashi@godrejinds.com

Rev.No.00, Dated: 01.04.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· Trade name: Behenic Acid · INCI name: docosanoic acid

· CAS Number:

· Docosanoic acid – 112-85-6

· EC number:

· Docosanoic acid - 204-010-8

- Registration number - 01-2119910372-49-0001

· 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

· Application of the substance / the mixture

Used in Soaps, cosmetics, detergents; Lubricants, softening and release agents

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer:

Godrej industries Limited, Plot No. N-73, Addl. MIDC, Ambernath East, Thane -421506, India

· Further information obtainable from:

Mr. R.V. Dubhashi - rv.dubhashi@godrejinds.com

• T: 91-22 2519 4768 Office hours only (08.30 – 17.00 hours GMT +5.5 hours)

· 1.4 Emergency telephone number:

Contact details:

Emergency telephone number: 91-0251-262-4292

Office hours only, (08.30 –17.00 hours GMT +5.5 hours) Other Comments

(e.g. language(s) of the phone service): English

SECTION 2: Hazards identification

· Classification of the substance or mixture



GHS 07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

- · Hazard pictograms
- · Signal word Warning
- · Hazard statements

Causes skin irritation.

Causes serious eye irritation.

· Precautionary statements



GHS 07

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Wear eye protection / face protection. Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists:

Get medical advice/attention. If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 1 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 1 Fire = 1

Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterization: Substances

CAS No. Description
Docosanoic acid – 112-85-6
Identification number(s)

· EC number: Docosanoic acid – 204-010-8

Additional information:

Molecular Formula: Docosanoic acid – 112-85-6 - 85.0% - 96.0%

Molecular weight: 340.58g/mol

SVHC The substance is not in the list of SVHC substances

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Sore throat, cough. Remove to fresh air. If suffocation is serious, take to a physician.

After skin contact:

Redness, pain. Remove contaminated clothing, flush skin with water or shower, and take to a physician if necessary.

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After eye contact: Redness, pain. Flush with water; take to a physician if necessary.

After swallowing:

Sore throat, abdominal pain. Rinse mouth, drink plenty of water, see physician. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed Sore throat, abdominal pain

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents: Dry powder, carbon dioxide or foam.
- · For safety reasons unsuitable extinguishing agents: Water jet.
- · 5.2 Special hazards arising from the substance or mixture

Combustible, keep away from open flame, no smoking. Liquid product may have temperature exceeding 69°C

- · 5.3 Advice for firefighters
- · Protective equipment: Use self-contained breathing equipment if in confined place.
- · Additional information No further relevant information available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Use gloves, face shield.

6.2 Environmental precautions: Do not allow to flow into drainage system.

6.3 Methods and material for containment and cleaning up: Collect leakage in sealable containers, soak up with sand or other inert absorbent and remove to safe place. Wash site with sodium bicarbonate solution or soda ash. Can also allow spillage to solidify, and then shovel into containers. Clean up area immediately.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for Disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use gloves and wear goggles when handling. Always work safely around open hatches on bulk tanks. The low density makes flotation difficult for immersed person.

Information about fire - and explosion protection: Avoid open flames.

- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles:

Use leak-proof and sealed bags. Store on pallets in well-ventilated, dry locations, at 25.0 – 30.0°C temperature and away from direct sunlight.

· Information about storage in one common storage facility:

In bulk, store at about 5-10°C above melting point. Temperature higher than necessary degrades quality at rates dependent on time and temperature of exposure.

· Further information about storage conditions:

Exposure to ultraviolet light and sunlight must be minimized to prevent quality loss.

7.3 Specific end use(s) Used in Soaps, cosmetics, detergents; Lubricants, softening and release agents

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SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

8.1 Control Parameters

Ingredients with limit values that require monitoring at the workplace:

Docosanoic acid – 112-85-6

Russia - Occupational Exposure Limits (OELs); STEL 5 mg/m3, JUNE 2003

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Respiratory protection:

Appropriate NIOSH/MSHA approved air-purifying respirator should be used if a mist, vapor or dust is generated. A NIOSH/MSHA approved self-contained breathing apparatus or air-supplied respirator is recommended if the concentration exceeds the capacity of cartridge respirator.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- \cdot **Material of gloves** Use recommended rubber or plastic gloves to prevent skin contact.
- · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

Safety glasses, goggles, or face shield recommended to protect eyes from mists or splashing.

- · Body protection: Protective work clothing
- · Risk management measures

Good industrial hygiene practices should be followed. Avoid breathing (heated) vapors. Avoid eye and skin contact.

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

Appearance: White solid flakes

Form: flakes
Colour: White

· **Odour:** Characteristic

Change in condition

Melting point/Melting range: 77 °C - 78 °C **Boiling point/Boiling range:** 306 °C at 128 mm

Flash point:	> 200 °C (Calculated)
Flammability (solid, gaseous):	Product is not flammable.
Self-igniting:	ca. 395 ℃
Danger of explosion:	Product does not present an explosion hazard
Vapour pressure:	< 1mm
Specific gravity	0.847 at 69.3° C
Solubility in:	
water at 20 °C:	Insoluble
9.2 Other information	Soluble in alkyl acetates, alcohols, HCOOCH3, phenyls, CS2, CCl4
Density at 20 °C (68 °F):	0.5 g/cm³ (4.173 lbs/gal) (4.173 lbs/gal)
· Relative density	0.822
· Vapour density	>1 (Air = 1)
Solubility in / Miscibility with	
Water:	Insoluble.
· Partition coefficient (n-octanol/w	ater) at
25 ℃ (77 °F):	9.9088 log POW
· Viscosity:	
Dynamic:	Not applicable.
· Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity
- **10.2 Chemical stability:** This product is stable under normal conditions.
- · Thermal decomposition / conditions to be avoided:

Does not decompose up to 204 °C. Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide.

- $\cdot \ \textbf{10.3 Possibility of hazardous reactions} \ \textit{No dangerous reactions known}.$
- · 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: Strong oxidizing agents.
- 10.6 Hazardous decomposition products: carbon monoxide and/or carbon dioxide.
- · Additional information: Not available

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

· Acute toxicity:

Oral	LD50	>5000 mg/kg (rat (Wistar) male/female)
Dermal	LD50	> 2000 mg/kg bw (Rabbit (New Zealand White) male/female)

Primary irritant effect:

On the skin: No irritant effect. • **on the eye:** Not irritating

Sensitization: No sensitizing effects known.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

The substance do not exhibit any CMR effect

SECTION 12: Ecological information

· 12.1 Toxicity

NOEC (3 d)	1016 mg/L (Scenedesmus subspicatus (Algae))
LC 50 (48 h)	>10000 mg/L (Leucisus idus)

· 12.2 Persistence and degradability

Biodegradation in Water: Conc.10 mg/L

%Degr.72

Parameter:CO2 evolution Sampling

time: 28 d

Result: Readily Biodegradable

12.3 Bioaccumulative potential The substance is expected to be non Bioaccumulative.

12.4 Mobility in soil Koc Value at 25 °C is found to be 51050 indicating that Behenic Acid Vis non-mobile in soil.

- · Additional ecological information:
- · General notes: Generally not hazardous for water
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.

12.6 Other adverse effects No further relevant information available.

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SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · **Recommendation** Waste may be disposed of by a licensed waste disposal company.
- · European waste catalogue

07 06 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics

- · Uncleaned packaging:
- · **Recommendation:** Follow local, state and federal disposal regulations.
- · Recommended cleansing agents: Not available

SECTION 14: Transport information		
· 14.1 UN-Number		
· ADR, ADN, IMDG, IATA	Not applicable	
· 14.2 UN proper shipping name		
· ADR, ADN, IMDG, IATA	Not applicable.	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA	Not applicable.	
· Class		
.14.4 Packing report		
ADR, IMDG, IATA	Not applicable.	
.14.5 Environmental hazards		
.marine pollutant	No	
14.6 Special precautions for user	Not applicable	
14.7 Transport in bulk according to anno	e x II of Not applicable	
MARPOL 73/78 & the IBC Code		
UN "Model Regulation":	Not applicable	

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SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Labelling according to Regulation (EC) No 1272/2008 Void
- · Hazard pictograms Void
- · Signal word Void
- Hazard statements Void

National regulations: -

· Other regulations, limitations and prohibitive regulations

US TSCA: Listed Japan

MITI: Listed

New Zealand (NZioC): Listed

Australian Inventory of Chemical Substances (AICS): Listed

Philippine Inventory of Chemicals and Chemical Substances (PICCS): Listed China

(IECSC): Listed

- · Substances of very high concern (SVHC) according to REACH, Article 57 the substance is not listed as SVHC.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

The information presented here is believed to be accurate and pertains only to the product when stored in a sealed condition, as prescribed here. The information is given in good faith, but no warranty, express or implied, is made. Users should make their own investigations, for their specific applications and processes, to determine the suitability of the safety information mentioned here. Godrej Industries Limited will in no way be liable for any claims, losses and / or damages of any third party, or for lost profits, or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, from the use of this product.

Department issuing MSDS: Product safety department.

Contact:

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Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International

Transport of Dangerous Goods by Rail)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of

Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American

Chemical Society) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/ EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

ECHA Dossier

http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d897b7c-2808-010c-e044-00144f67d249/DISS-9d897b7c-2808-010c-e044-00144f67d249 DISS-9d897b7c-2808-010c-e044-00144f67d249.html

http://en.wikipedia.org/wiki/Stearicacid

* Data compared to the previous version altered.

- •Section 1: Identification of the substance/mixture and of the company/undertaking
- •Section 2: Hazards Identification
- •Section 3: Composition/information on ingredients
- •Section 4: First-aid measures.
- •Section 5: Fire-fighting measures
- •Section 6: Accidental Release measures
- •Section 7: Handling and storage.
- •Section 8: Exposure Controls/Personal protection.
- •Section 9: Physical and Chemical properties.
- •Section 10: Stability and Reactivity.
- •Section 11: Toxicological Information.
- •Section 12: Ecological Information.
- •Section 13: Disposal consideration.
- •Section 15: Regulatory information
- •Section 16: Other information