


MACKAM 810AB

Revision Date 10/15/2021

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

- Trade name MACKAM 810AB
- Synonyms Capryl/Capramidopropyl Betaine

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

- no data available

1.3 Details of the supplier of the safety data sheet
Company

Verdant Specialty Solutions US LLC
 24601 Governors Highway, University Park
 IL 60484 - United States
 Tel: +1708-235-7200

1.4 Emergency telephone

- +1 703-741-5970 [Chemtrec]
- +1 (800) 424-9300 CHEMTREC® (USA & Canada)

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture
HCS 2012 (29 CFR 1910.1200)

Serious eye damage, Category 1
 Skin sensitization, Category 1

H318: Causes serious eye damage.
 H317: May cause an allergic skin reaction.

2.2 Label elements
HCS 2012 (29 CFR 1910.1200)
Pictogram

Signal Word

- Danger

Hazard Statements

- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.

Precautionary Statements
Prevention

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- P272 Contaminated work clothing should not be allowed out of the workplace.


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- P280 Wear eye protection/ face protection.
- P280 Wear protective gloves.

Response

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P363 Wash contaminated clothing before reuse.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- H401: Toxic to aquatic life.
- H412: Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients
3.1 Substance

- Not applicable, this product is a mixture.

3.2 Mixture

- Synonyms Capryl/Capramidopropyl Betaine

Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [%]
Caprylamidopropyl Betaine	*****	>= 20 - < 25
Capramidopropyl Betaine	*****	>= 10 - < 15
Caprylamidopropyl Dimethylamine	22890-10-4	>= 0.5 - < 1
Capramidopropyl Dimethylamine	22890-11-5	>= 0.3 - < 0.5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Non Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [%]
Water	7732-18-5	50- 60

SECTION 4: First aid measures
4.1 Description of first-aid measures**In case of inhalation**

- Negligible or unlikely exposure pathways
- If breathed in, move person into fresh air.
- Consult a physician if necessary.

In case of skin contact

- In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Seek medical advice.




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- Wash contaminated clothing before re-use.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Seek medical advice.

In case of ingestion

- Do not induce vomiting without medical advice.
- If victim is conscious:
- Rinse mouth with water.
- Keep at rest.
- Do not give anything to drink.
- Do not leave the victim unattended.
- Vomiting may occur spontaneously
- Risk of product entering the lungs on vomiting after ingestion.
- Lay victim on side.
- Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed
Effects

- Skin contact may aggravate existing skin disease

4.3 Indication of any immediate medical attention and special treatment needed
Notes to physician

- Treat symptomatically.
- There is no specific antidote available.

SECTION 5: Firefighting measures

<u>Flash point</u>	> 200 °F (> 93 °C) closed cup
	Flammability class: Will burn
<u>Autoignition temperature</u>	No data available
<u>Flammability / Explosive limit</u>	No data available

5.1 Extinguishing media
Suitable extinguishing media

- Extinguishing media - small fires
- Dry chemical
- Carbon dioxide (CO₂)
- Extinguishing media - large fires
- Foam
- Water spray

Unsuitable extinguishing media

- High volume water jet
(frothing possible)



5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

- Under fire conditions:
- Will burn
- (following evaporation of water)
- Container may rupture on heating.

Hazardous combustion products:

- On combustion or on thermal decomposition (pyrolysis), releases:
- Carbon oxides
- Nitrogen oxides (NOx)

5.3 Advice for firefighters

- no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Wear suitable protective equipment.
- For further information refer to section 8 "Exposure controls / personal protection."

6.2 Environmental precautions

- Do not flush into surface water or sanitary sewer system.
- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up

Methods for containment

- Dam up with sand or inert earth (do not use combustible materials).
- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.

Recovery

- Soak up with inert absorbent material.
- Shovel or sweep up.
- Keep in suitable, closed containers for disposal.
- Never return spills in original containers for re-use.

Decontamination / cleaning

- Clean contaminated surface thoroughly.
- Flush with plenty of water.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.
- Wash nonrecoverable remainder with large amounts of water.

6.4 Reference to other sections

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS



SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety practice.
- Avoid inhalation of vapor or mist.
- Avoid contact with skin and eyes.
- Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
- Avoid localized overheating.
- Vent drums while heating
- Mix thoroughly before use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Keep container tightly closed in a dry and well-ventilated place.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer
- Keep away from: Strong oxidizing agents

Requirements for storage rooms and vessels

Recommended storage temperature: 41 - 86 °F (5 - 30 °C)

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

- Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Control measures

Engineering measures

- Effective exhaust ventilation system

Individual protection measures

Respiratory protection

- No personal respiratory protective equipment normally required.

Hand protection

- Recommended preventive skin protection
- Gloves
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of


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cuts, abrasion, and the contact time.

Eye protection

- Safety glasses with side-shields

Skin and body protection

- Recommended preventive skin protection
- Footwear protecting against chemicals
- Impervious clothing

Protective measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Emergency equipment immediately accessible, with instructions for use.
- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

<u>Physical state</u>	liquid
<u>Color</u>	clear
<u>Odor</u>	slight
<u>Odor Threshold</u>	No data available
<u>Melting point/freezing point</u>	No data available
<u>Initial boiling point and boiling range</u>	<u>Boiling point/boiling range</u> : ca. 212 °F (100 °C) (760 mmHg (1,013.25 hPa))
<u>Flammability (solid, gas)</u>	No data available
<u>Flammability (liquids)</u>	No data available
<u>Flammability / Explosive limit</u>	No data available
<u>Flash point</u>	> 200 °F (> 93 °C) closed cup Flammability class: Will burn
<u>Autoignition temperature</u>	No data available
<u>Decomposition temperature</u>	No data available
<u>pH</u>	4.5 - 5.5 (100 % (m/v))
<u>Viscosity</u>	No data available
<u>Solubility</u>	<u>Water solubility</u> : soluble


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<u>Partition coefficient: n-octanol/water</u>	No data available
<u>Vapor pressure</u>	ca. 20 mmHg (26.66 hPa) (77 °F (25 °C))
<u>Density</u>	No data available
<u>Relative density</u>	1.05 (77 °F (25 °C))
<u>Relative vapor density</u>	No data available
<u>Particle characteristics</u>	No data available
<u>Evaporation rate (Butylacetate = 1)</u>	No data available

9.2 Other information

<u>Volatiles by Volume</u>	59 %
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SECTION 10: Stability and reactivity
10.1 Reactivity

- no data available

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- polymerization**
- Hazardous polymerization does not occur.

10.4 Conditions to avoid

- Keep away from heat and sources of ignition.

10.5 Incompatible materials

- Strong oxidizing agents

10.6 Hazardous decomposition products

- Hazardous decomposition products**
- On combustion or on thermal decomposition (pyrolysis), releases:
- Nitrogen oxides (NO_x)
- Carbon oxides

SECTION 11: Toxicological information
11.1 Information on toxicological effects**Acute toxicity**

Acute oral toxicity	Not classified as harmful if swallowed
Acute inhalation toxicity	Not classified as harmful by inhalation
Acute dermal toxicity	Not classified as harmful by contact with skin
Acute toxicity (other routes of administration)	No data available
<u>Skin corrosion/irritation</u>	Not classified as irritating to skin


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<u>Serious eye damage/eye irritation</u>	Risk of serious damage to eyes.
<u>Respiratory or skin sensitization</u>	May cause an allergic skin reaction.
<u>Mutagenicity</u>	
Genotoxicity in vitro	No data available
Genotoxicity in vivo	No data available
<u>Carcinogenicity</u>	No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA
ACGIH
NTP
IARC
OSHA

Toxicity for reproduction and development

Toxicity to reproduction / fertility	No data available
Developmental Toxicity/Teratogenicity	No data available
<u>STOT</u>	
STOT-single exposure	No data available
STOT-repeated exposure	No data available
<u>Experience with human exposure</u>	No data available
<u>Aspiration toxicity</u>	No data available

SECTION 12: Ecological information
12.1 Toxicity

<u>Aquatic Compartment</u>	
Acute toxicity to fish	No data available
Acute toxicity to daphnia and other aquatic invertebrates	No data available
Toxicity to aquatic plants	No data available
Toxicity to microorganisms	No data available
Chronic toxicity to fish	No data available
Chronic toxicity to daphnia and other aquatic invertebrates	No data available

12.2 Persistence and degradability

<u>Abiotic degradation</u>	No data available
<u>Physical- and photo-chemical elimination</u>	No data available
<u>Biodegradation</u>	No data available

12.3 Bioaccumulative potential


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Partition coefficient: n-octanol/water No data available

Bioconcentration factor (BCF) No data available

12.4 Mobility in soil

Adsorption potential (Koc) No data available

Known distribution to environmental compartments No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No data available

SECTION 13: Disposal considerations
13.1 Waste treatment methods
Waste Code

- Environmental Protection Agency
- Hazardous Waste – NO

Advice on cleaning and disposal of packaging

- Rinse with an appropriate solvent.
- Dispose of contents/container in accordance with local regulation.

SECTION 14: Transport information
DOT

not regulated

TDG

not regulated

NOM

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information
15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory




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Canadian Domestic Substances List (DSL)	- One or more components not listed on inventory
Australia Inventory of Chemical Substances (AICS)	- One or more components not listed on inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- One or more components not listed on inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- One or more components not listed on inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- One or more components is not listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.
EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	- When purchased from a Verdant Specialty Solutions legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.
Korea. Act on Registration and Evaluation of Chemicals	- When purchased from a Verdant Specialty Solutions legal entity based in Korea, this product is compliant with "Act on Registration and Evaluation of Chemicals" (AREC or K-REACH, Article 10) as all its components are either excluded, exempt, and/or (pre)registered. When purchased from a legal entity outside of Korea, please contact your local representative for additional information.

15.2 Federal Regulations
US. EPA EPCRA SARA Title III
Section 313 Toxic Chemicals (40 CFR 372.65)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.




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Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

Components	CAS-No.	Reportable quantity
Acetic acid, 2-chloro-	79-11-8	100 lb

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

Components	CAS-No.	Reportable quantity
Acetic acid, 2-chloro-	79-11-8	100 lb

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Components	CAS-No.	Reportable quantity
Acetic acid, 2-chloro-	79-11-8	100 lb

15.3 State Regulations
US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product can expose you to chemicals including Acetic acid, 2,2-dichloro- (CAS # 79-43-6) , which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

This product can expose you to chemicals including Acetic acid, 2,2-dichloro- (CAS # 79-43-6)

This product can expose you to chemicals including Acetic acid, 2,2-dichloro- (CAS # 79-43-6)

SECTION 16: Other information
NFPA (National Fire Protection Association) - Classification

Health	2 moderate
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	2 moderate
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- Product evaluated under the US GHS format.

Date Prepared: 10/15/2021

Key or legend to abbreviations and acronyms used in the safety data sheet

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.



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- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.

