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1. Identification

1.1. Product identifier

Product Identity Microvit A DLC 1000
Alternate Names Microvit A DLC 1000

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

Intended useSee Technical Data Sheet.Application MethodSee Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Adisseo USA Inc.

4400 North Point Pkwy, Suite 275

Alpharetta, GA 30022

Emergency

24 hour Emergency Telephone No.Carechem24 Toll Free (800) 727-5083Customer Service: Adisseo USA Inc.For Product Information: (800) 727-1019Tel. 678.339.1500 – Fax 678.339.1600

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Flam. Liq. 3;H226 Flammable liquid and vapor. Eye Dam. 1;H318 Causes serious eye damage.

Repr. 1B;H360 May damage fertility or the unborn child.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H226 Flammable liquid and vapor.

H318 Causes serious eye damage.

H360 May damage fertility or the unborn child.

[Prevention]:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P235 Keep cool.



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P240 Ground / bond container and receiving equipment.

P241 Use explosion-proof electrical / ventilating / light / equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P308+313 IF exposed or concerned: Get medical advice / attention.

P310 Immediately call a POISON CENTER or doctor / physician.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Retinol, propionate CAS Number: 0007069-42-3	25 - 50	Repr. 1B;H360 Aquatic Chronic 4;H413	[1]
Polyethylene glycol CAS Number: 0025322-68-3	25 - 50	STOT SE 3;H335	[1]
Sorbitan monooleate, ethoxylated CAS Number: 0009005-65-6	1.0 - 10	Not Classified	[1]
Ethyl lactate CAS Number: 0000687-47-8	1.0 - 10	Flam. Liq. 3;H226 STOT SE 3;H335 Eye Dam. 1;H318	[1]
Propanol CAS Number: 0000071-23-8	1.0 - 10	Flam. Liq. 2;H225 Eye Dam. 1;H318 STOT SE 3;H336	[1][2]
Ethoxyquin CAS Number: 0000091-53-2	1.0 - 10	Acute Tox. 4;H302	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

^[1] Substance classified with a health or environmental hazard.

^[2] Substance with a workplace exposure limit.

^[3] PBT-substance or vPvB-substance.

^{*}The full texts of the phrases are shown in Section 16.



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4. First aid measures

4.1. Description of first aid measures

General SPECIAL NOTE FOR PHYSICIAN: All treatments should be based on observed signs and

symptoms of distress in the patient. Consideration should be given to the possibility that

overexposure to materials other than this product may have occurred. Treat

symptomatically. No specific antidote available.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give

artificial respiration. If unconscious place in the recovery position and obtain immediate

medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and

seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a

recognized skin cleanser.

Ingestion If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by

mouth to an unconscious person. Seek medical attention. Do not leave victim unattended.

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

Overview Acute Eye: Contact with liquid or vapor can cause irritation and redness.

Acute Skin: Low acute dermal toxicity. Liquid or vapor can cause irritation and redness on

prolonged contact.

Acute Inhalation: Vapor can cause respiratory tract irritation, intoxication and loss of

coordination.

Acute Ingestion: Toxic if ingested. Ingestion of large quantities may cause vomiting, diarrhea

and headache.

Medical Conditions Possibly Aggravated by Exposure: Adverse effects may arise if taking anticoagulants, colestipol, cholestyramine, mineral oil, oral contraceptives, Vitamin A

therapy, Vitamin E therapy See section 2 for further details.

Eyes Causes serious eye damage.

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Oxides of carbon

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Keep cool.

Ground / bond container and receiving equipment.

Use explosion-proof electrical / ventilating / light / equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.



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5.3. Advice for fire-fighters

Firefighters should wear NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water.

Closed containers may rupture due to buildup of pressure when exposed to extreme heat.

None

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate protective gear for the situation. (See Personal Protection information in Section 8). Eliminate all sources of ignition until the area is determined to be free from explosion or fire hazards.

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

6.3. Methods and material for containment and cleaning up

Absorb with an inert absorbent. Sweep up and place in an appropriate closed container. Clean up residual material by washing area with water. Collect washings for disposal. Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. Handling and storage

7.1. Precautions for safe handling

Avoid breathing vapors. Avoid direct or prolonged contact with skin and eyes. Use non-sparking tools and grounded/bonded equipment and containers when transferring.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

Incompatible materials: Strong bases, strong acids and strong oxidizing agents

Maximum Storage Temperatures: Store at <112F)

Store in tightly-closed, original container. Store in an area that is cool, dry, dark and well-ventilated.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.



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8. Exposure controls and personal protection

8.1. Control parameters

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Exposure

CAS No.	Ingredient	Source	Value
0000071-23-8 Propanol	Propanol	OSHA	TWA 200 ppm (500 mg/m3)
		ACGIH	TWA: 100 ppmRevised 2007,
		NIOSH	TWA 200 ppm (500 mg/m3) ST 250 ppm (625 mg/m3) [skin]
		Supplier	No Established Limit
0000091-53-2	Ethoxyquin	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000687-47-8	Ethyl lactate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007069-42-3 Retinol, propionate	OSHA	No Established Limit	
	ACGIH	No Established Limit	
	NIOSH	No Established Limit	
		Supplier	No Established Limit
0009005-65-6	Sorbitan monooleate, ethoxylated	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0025322-68-3 Pol	Polyethylene glycol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient Source		Value
0000071-23-8	Propanol	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000091-53-2	Ethoxyquin	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000687-47-8	Ethyl lactate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;



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0007069-42-3	Retinol, propionate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0009005-65-6	Sorbitan monooleate, ethoxylated	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0025322-68-3	Polyethylene glycol	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory When respirators are required, select NIOSH/MSHA approved equipment based on actual

or potential airborne concentrations and in accordance with regulatory standards and/or

industrial recommendations. Air-purifying (half-mask/full-face) respirator with cartridges/canister approved for use against organic vapors is recommended.

Eyes A minimum of safety glasses with side shields is recommended.

Skin Skin contact should be minimized through the use of chemical-resistant gloves and boots,

and suitable protective clothing.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the

use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits

suitable respiratory protection must be worn.

Other Work Practices The following general measures should be taken when working or handling this material: 1)

Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. 3) Wash exposed skin

promptly to remove accidental splashes of contact with this material.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance Light brown oily Liquid

Odor Slight

Odor threshold

pH

Not Measured

Not Measured

Melting point / freezing point

Not Measured

Initial boiling point and boiling range

Flash Point

Evaporation rate (Ether = 1)

Flammability (solid, gas)

Not Measured

Not Applicable

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Upper/lower flammability or explosive limits

Lower Explosive Limit: 2.2

Upper Explosive Limit: 14

Vapor pressure (Pa)Not MeasuredVapor DensityNot MeasuredSpecific Gravity1.01 at 20C (68F)

Partition coefficient n-octanol/water (Log Kow)

Not Measured

Auto-ignition temperatureNot MeasuredDecomposition temperatureNot Measured

Viscosity (cSt) 150 cps at 10C (50F), 900 cps at 0C (32F)

9.2. Other information

No other relevant information.

Solubility in Water

10. Stability and reactivity

Miscible

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Combustible materials, heat, open flame and sparks.

10.5. Incompatible materials

Strong bases, strong acids and strong oxidizing agents

10.6. Hazardous decomposition products

Oxides of carbon

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Retinol, propionate - (7069-42-3)	No data available	No data available	No data available	No data available	No data available
Polyethylene glycol - (25322-68-3)	30,200.00, Rat - Category: NA	20,000.00, Rabbit - Category: NA	No data available	No data available	No data available
Sorbitan monooleate, ethoxylated - (9005-65-6)	No data available	No data available	No data available	No data available	No data available

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Ethyl lactate - (687-47-8)	No data available	No data available	No data available	No data available	No data available
Propanol - (71-23-8)	8,038.00, Rat - Category: NA	4,000.00, Rabbit - Category: 5	33.80, Rat - Category: NA	No data available	20,000.00, Rat - Category: NA
Ethoxyquin - (91-53-2)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description	
Acute toxicity (oral)		Not Applicable	
Acute toxicity (dermal)		Not Applicable	
Acute toxicity (inhalation)		Not Applicable	
Skin corrosion/irritation		Not Applicable	
Serious eye damage/irritation	1	Causes serious eye damage.	
Respiratory sensitization		Not Applicable	
Skin sensitization		Not Applicable	
Germ cell mutagenicity		Not Applicable	
Carcinogenicity		Not Applicable	
Reproductive toxicity	1B	May damage fertility or the unborn child.	
STOT-single exposure		Not Applicable	
STOT-repeated exposure		Not Applicable	
Aspiration hazard		Not Applicable	

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Retinol, propionate - (7069-42-3)	Not Available	Not Available	Not Available
Polyethylene glycol - (25322-68-3)	1,000.00, Salmo salar	Not Available	Not Available
Sorbitan monooleate, ethoxylated - (9005-65-6)	Not Available	Not Available	Not Available
Ethyl lactate - (687-47-8)	Not Available	Not Available	Not Available
Propanol - (71-23-8)	4,480.00, Pimephales promelas	3,100.00, Daphnia pulex	4,480.00 (96 hr), Selenastrum capricornutum



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Ethoxyquin - (91-53-2)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

DOT (Domestic Surface Transportation)

14.1. UN number NA1993

14.2. UN proper shipping Combustible liquid, n.o.s., (contains n-propanol)

name

14.3. Transport hazard DOT Hazard Class: 3 class(es)

44.4.5.11

14.4. Packing group

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information



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15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected

regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA

Inventory. B3 D2A E

WHMIS Classification
US EPA Tier II Hazards

Fire: Yes

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Propanol

Pennsylvania RTK Substances (>1%):

Propanol

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

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The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H360 May damage fertility or the unborn child.

H413 May cause long lasting harmful effects to aquatic life.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: The information and recommendations in this data sheet are believed to be correct and reliable. However, the data are offered for consideration and verification by the user and Adisseo Inc. offers no guarantee, warranty or representation as to the accuracy or completeness of the data.

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