

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

SECTION 1. IDENTIFICATION

Product name : AMPHISOL® A
Substance name : hexadecyl dihydrogen phosphate

Manufacturer or supplier's details

Company name of supplier : DSM Nutritional Products
Address : 45 Waterview Blvd
Parsippany NJ 07054-1298
Telephone : (908) 475-7373
Telefax : (908) 475-7406
Emergency telephone number : 1-800-424-9300 (24 HR CHEMTREC, CA & US); Outside CA & US +1-703-572-3887 (COLLECT CALLS ACCEPTED)
E-mail address of person responsible for the SDS : sds.nutritionalproducts@dsm.com

Recommended use of the chemical and restrictions on use

Recommended use : Emulsifier
For cosmetic products (skin and hair care)

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Skin irritation : Category 2
Serious eye damage : Category 1

GHS label elements

Hazard pictograms :



Signal word : Warning
Danger

Hazard statements : May form combustible dust concentrations in air.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

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.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

Other hazards

Risk of dust explosion.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Cetyl phosphoric acid ester
1-hexadecanol dihydrogen phosphate
EC no. 911-302-5

Molecular formula : C16-H35-O4-P

Brief description of the product : Substance

Substance name : hexadecyl dihydrogen phosphate

CAS-No. : 3539-43-3

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
hexadecyl dihydrogen phosphate	3539-43-3	>= 90 - <= 100

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
Continue rinsing eyes during transport to hospital.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

If swallowed : Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.
Do NOT induce vomiting.

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

Most important symptoms
and effects, both acute and
delayed : No specific symptoms known.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Foam
Water spray
Dry powder

Unsuitable extinguishing
media : High volume water jet

Specific hazards during fire-
fighting : Formation of corrosive gases by combustion.

Further information : Consider dust explosion hazard.

Special protective equipment
for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Evacuate personnel to safe areas.
tive equipment and emer- : Use personal protective equipment.
gency procedures : Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods and materials for
containment and cleaning up : Pick up and arrange disposal without creating dust.

SECTION 7. HANDLING AND STORAGE

Advice on protection against
fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust
is formed.
Take precautionary measures against static discharges.

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the ap-
plication area.

Conditions for safe storage : To maintain product quality, do not store in heat or direct sun-
light.

Keep container tightly closed and dry.

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Personal protective equipment

- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Hand protection :
Material : for example nitrile rubber
Remarks : Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Safety glasses with side-shields
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

- Appearance : powder
- Colour : white - beige
- Odour : odourless
- Odour Threshold : No information available.
- pH : No data available
- Melting point/range : 65.9 °C (1,013.25 hPa; OECD Test Guideline 102)
- Boiling point/boiling range : ≥ 220 °C (1,013 hPa; Regulation (EC) No. 440/2008, Annex, A.2)
Decomposes below the boiling point.
- Flash point : 214 °F (101 °C)
- Flammability (solid, gas) : May form combustible dust concentrations in air.
- Vapour pressure : 0.001 Pa (20 °C; OECD Test Guideline 104)
0.025 hPa (50 °C; OECD Test Guideline 104)
- Relative vapour density : Not applicable
- Density : 1.04 g/cm³ (25 °C; OECD Test Guideline 109)
- Water solubility : 0.026 g/l (20 °C, pH 4.5)
slightly soluble
- Solubility in other solvents : Oils and fats: soluble

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

	Ethanol: soluble
Partition coefficient: n-octanol/water	: log Pow 2.83 (20 °C, pH 4.5)
Auto-ignition temperature	: No data available
Thermal decomposition	: Decomposes on heating. Potential for exothermic hazard
Explosive properties	: Not explosive
Oxidizing properties	: No data available

Other information

Combustibility index for deposited dust	: 2 (ca. 21 °C)
Dust explosion class	: St(H)1 (Product sample; The value was determined in the modified Hartmann tube.)
Minimum ignition temperature of a dust/air mix	: ca. 260 °C determined in the BAM oven
Molecular weight	: 322.40 g/mol
Acid number (mg KOH/g)	: 300 - 330 mg/g
Surface tension	: 32.4 mN/m (20 °C, OECD Test Guideline 115)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No hazards to be specially mentioned.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Dust may form explosive mixture in air.
Conditions to avoid	: Heat
Incompatible materials	: Bases Strong acids Strong oxidizing agents
Hazardous decomposition products	: Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50 (Rat): > 16,000 mg/kg (OECD Test Guideline 401)
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg (OECD Test Guideline 402)
Skin irritation	: Irritating to skin. (reconstructed human epidermis (RhE), OECD Test Guideline 439)

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

	: no phototoxic skin reaction (Guinea pig, CTFA Test Guideline)
Eye irritation	: Severe eye irritation (Bovine cornea, OECD Test Guideline 437)
Sensitisation	: Did not cause sensitisation on laboratory animals. (Guinea pig, Maximisation Test, OECD Test Guideline 406) : no photoallergenic skin reaction (Guinea pig, CTFA Test Guideline)
Genotoxicity in vitro	: not mutagenic (In vitro gene mutation study in mammalian cells, OECD Test Guideline 476) : not mutagenic (Ames test, OECD Test Guideline 471) : not genotoxic (Chromosome aberration test in vitro, OECD Test Guideline 473)
Carcinogenicity	: No indication for carcinogenicity known.
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive toxicity	: NOAEL: 1,000 mg/kg bw/d (Rat, Oral, OECD Test Guideline 421)
Teratogenicity	: NOEL: 1,000 mg/kg bw/d (Rat, Oral, OECD Test Guideline 421)
STOT - single exposure (Acute exposure)	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: NOAEL (Oral, Rat) : 1564 mg/kg bw/d (OECD Test Guideline 407)
Further information	: May cause irritation of respiratory tract.
Aspiration toxicity	: No aspiration toxicity classification

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

SECTION 12. ECOLOGICAL INFORMATION**Toxicity**

- Toxicity to fish : Oncorhynchus mykiss (rainbow trout)
LC50 (96 h) > 100 mg/l
(OECD Test Guideline 203)
- Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)
NOEC (48 h) 100 mg/l
(OECD Test Guideline 202)
- Toxicity to algae : Desmodesmus subspicatus (green algae)
EC10 (72 h) > 10.2 mg/l
(OECD Test Guideline 201)
- Toxicity to bacteria : activated sludge
Concentration of the substance 100 mg/l
No inhibition was observed under the biodegradation test conditions.
(nominal concentration)
(OECD Test Guideline 301F)

Persistence and degradability

- Biodegradability : Not readily biodegradable.
51 % (28 d)
(OECD Test Guideline 301F)
- : Inherently biodegradable.
55 % (28 d)
(OECD Test Guideline 302C)
Primary biodegradation

Bioaccumulative potential

- Partition coefficient: n-octanol/water : log Pow 2.83 (20 °C , pH 4.5)

Mobility in soil

- Distribution among environmental compartments : No data available
- Surface tension : 32.4 mN/m (20 °C, OECD Test Guideline 115)

Other adverse effects

- Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
- Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
- Additional ecological information : There is no data available for this product.

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.
- Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated packaging : Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

- SARA 311/312 Hazards** : Serious eye damage or eye irritation
Skin corrosion or irritation

- SARA 313** : 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.

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

hexadecan-1-ol

36653-82-4

>= 1 - < 5 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

hexadecyl dihydrogen phosphate

3539-43-3

hexadecan-1-ol

36653-82-4

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

TSCA list

No substances are subject to a Significant New Use Rule.

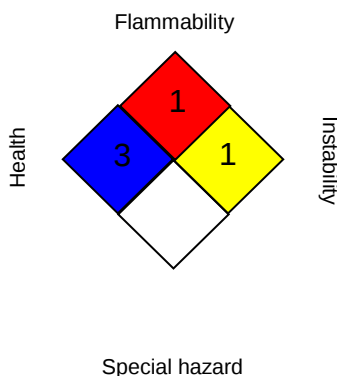
No substances are subject to TSCA 12(b) export notification requirements.

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

SECTION 16. OTHER INFORMATION**Further information****NFPA 704:****HMIS® IV:**

HEALTH	/	3
FLAMMABILITY		1
PHYSICAL HAZARD		1

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

ACGIH = American Conference of Governmental Industrial Hygienists. CFR = Code of Federal Regulations. EPA = Environmental Protection Agency. NIOSH = National Institute of Occupational

AMPHISOL® A**0486019**

Version 3.1

Revision Date 12/08/2022

Date of last issue: 01/09/2019

al Safety and Health. OSHA = Occupational Safety and Health Administration. STEL = Short term exposure limit. TLV = Threshold Limit Value. TLV-C = Ceiling Limit Value. TWA = Time Weighted Average.

Revision Date : 12/08/2022

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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN