



Material Safety Data Sheet

The Dow Chemical Company

Product Name: 2-ETHYLHEXYL ACRYLATE 10-20 PPM MEHQ

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The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

2-ETHYLHEXYL ACRYLATE 10-20 PPM MEHQ

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400

Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview

Color: Colorless

Physical State: Liquid

Odor: Sweet

Hazards of product:

DANGER! Combustible liquid and vapor. Causes severe eye burns. May cause skin irritation. Causes burns of the mouth and throat. May cause allergic skin reaction. Causes respiratory tract irritation. Aspiration hazard. Can enter lungs and cause damage. Isolate area. Keep upwind of spill. Elevated temperatures can cause hazardous polymerization. Avoid temperatures above 38°C (100°F)

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

* Indicates a Trademark

Potential Health Effects

Eye Contact: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact: Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Skin Sensitization: Has caused allergic skin reactions in humans. Has caused allergic skin reactions when tested in guinea pigs.

Inhalation: Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs. Signs and symptoms of excessive exposure may include: May cause dizziness and drowsiness. Headache. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed.

Ingestion: Very low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat. Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Effects of Repeated Exposure: In animals, effects have been reported on the following organs: Kidney. Respiratory tract.

Cancer Information: Has caused tumors in skin painting tests in animals. Positive findings are believed to be secondary to chronic irritation/tissue injury.

3. Composition Information

Component	CAS #	Amount
2-Ethylhexyl acrylate	103-11-7	> 99.5 - < 100.0 %

4. First-aid measures

Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

Skin Contact: Immediately wash skin with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention without delay. Wash clothing before reuse. Destroy contaminated articles such as shoes.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth to an unconscious person.

Notes to Physician: Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Small spills: Absorb with materials such as: Sand. Sawdust. Large spills: Dike area to contain spill. Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Isolate area. Refer to Section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Material will float on water. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. Do not get in eyes. Avoid contact with skin and clothing. Do not swallow. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Electrically bond and ground all containers and equipment before transfer or use of material. Never use air pressure for transferring product. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Store in a dry place. Store away from direct sunlight or ultraviolet light. Store away from incompatible materials. See STABILITY AND REACTIVITY section. Maintain inhibitor and dissolved oxygen level. Do not purge containers of this material with nitrogen. Recommended inhibitor level is: 10 to 20 ppm. Recommended oxygen level is: 5 to 21 vol. %. Uninhibited monomer vapors can polymerize and plug relief devices. Store in the following material(s): Opaque HDPE plastic container. Glass-lined

container. Stainless steel. Aluminum. See Section 10 for more specific information. When appropriate, unique handling information for containers can be found on the product label. Ask for a product brochure.

Shelf life: Use within 12 Months

Storage temperature: < 38 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
2-Ethylhexyl acrylate	Dow IHG	TWA	5 ppm

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator. Eye wash fountain should be located in immediate work area.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Styrene/butadiene rubber. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Avoid gloves made of: Neoprene. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Odor	Sweet
Flash Point - Closed Cup	82 °C (180 °F) <i>Literature</i>
Flammable Limits In Air	Lower: 0.7 %(V) <i>Literature</i> Upper: 8.2 %(V) <i>Literature</i>
Autoignition Temperature	252 °C (486 °F) <i>Literature</i>
Vapor Pressure	0.12 mmHg @ 20 °C <i>Literature</i>
Boiling Point (760 mmHg)	216 °C (421 °F) <i>Literature</i> .

Vapor Density (air = 1)	6.4 Literature
Specific Gravity (H ₂ O = 1)	0.885
Freezing Point	-90 °C (-130 °F) Literature
Melting Point	Not applicable to liquids
Solubility in Water (by weight)	0.01 % @ 25 °C Literature
pH	No test data available
Evaporation Rate (Butyl Acetate = 1)	0.03 Literature
Dynamic Viscosity	1.54 cps @ 25 °C Literature

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures. Hygroscopic.

Conditions to Avoid: Avoid temperatures above 38 °C (100 °F). Exposure to elevated temperatures can cause product to decompose. Avoid static discharge. Avoid moisture. Do not blanket or purge with an inert gas to avoid depleting the oxygen concentration. Avoid direct sunlight or ultraviolet sources.

Inhibitor: Methyl ether of hydroquinone. Inhibitor Concentration (ppm): 10 - 1,100

Inhibitor: Phenothiazine. Inhibitor Concentration (ppm): 0.4 - 1.6

Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Aldehydes. Amines. Azides. Ethers. Free radical initiators. Halides. Iron oxides (rust). Mercaptans. Mineral acids. Peroxides. Strong inorganic bases. Avoid contact with metals such as: Brass. Copper. Avoid unintended contact with: Activated carbon. Silica gel. Aluminum oxide. Avoid contact with absorbent materials such as: Clay-based absorbents. Avoid unintended contact with peroxides.

Hazardous Polymerization

Can occur. Elevated temperatures can cause hazardous polymerization. The inhibitor used with this monomer can separate if product becomes frozen. Polymerization can be catalyzed by: Absence of air. Free radical initiators. High temperature. Peroxides. Uninhibited monomer vapors can polymerize and plug relief devices. Presence of water can accelerate rate of polymerization.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

LD50, Rat 4,435 - 6,400 mg/kg

Skin Absorption

LD50, Rabbit 7,520 - 16,000 mg/kg

Sensitization

Skin

Has caused allergic skin reactions in humans. Has caused allergic skin reactions when tested in guinea pigs.

Repeated Dose Toxicity

In animals, effects have been reported on the following organs: Kidney. Respiratory tract.

Chronic Toxicity and Carcinogenicity

Has caused tumors in skin painting tests in animals. Positive findings are believed to be secondary to chronic irritation/tissue injury.

Developmental Toxicity

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive Toxicity

In animal studies, did not interfere with reproduction.

Genetic Toxicology

In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

12. Ecological Information

CHEMICAL FATE

Data for Component: **2-Ethylhexyl acrylate**

Movement & Partitioning

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is medium (Koc between 150 and 500).

Henry's Law Constant (H): 4.32E-4 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 3.67 - 4.64 Measured

Partition coefficient, soil organic carbon/water (Koc): 430 Estimated

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.01E-11 cm3/s	6.4 h	Estimated

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
> 90 %	14 d	OECD 301C Test
75 %		OECD 301C Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
17 - 27 %	19 - 52 %	19 - 58 %	

Theoretical Oxygen Demand: 2.60 mg/mg

ECOTOXICITY

Data for Component: **2-Ethylhexyl acrylate**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*), static, 96 h: 15 - 20 mg/l

LC50, rainbow trout (*Oncorhynchus mykiss*), static renewal, 96 h: 2.67 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea *Daphnia magna*, 48 h: 17.45 mg/l

Aquatic Plant Toxicity

EC50, alga *Scenedesmus* sp., biomass growth inhibition, 96 h: 47 mg/l

Toxicity to Micro-organisms

EC50; bacteria, respiration inhibition, 0.5 h: > 10,000 mg/l

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DOW HAS NO CONTROL OVER

THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. Transport Information

DOT Non-Bulk

|| NOT REGULATED

DOT Bulk

|| Proper Shipping Name: COMBUSTIBLE LIQUID, N.O.S.

|| Technical Name: 2-ETHYLHEXYL ACRYLATE

Hazard Class: COMBUSTIBLE LIQUID ID Number: NA1993 Packing Group: PG III

IMDG

|| NOT REGULATED

ICAO/IATA

|| NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	Yes
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
2-Ethylhexyl acrylate	103-11-7	< 100.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Product Literature

Additional information on this product may be obtained by calling your Dow Chemical Company sales or customer service contact. Ask for a product brochure. Additional information on this and other Dow products may be obtained by visiting our web page at www.dow.com.

Hazard Rating System

NFPA	Health	Fire	Reactivity
	2	2	2

Recommended Uses and Restrictions

Chemical intermediate.

Revision

Identification Number: 78329 / 1001 / Issue Date 02/02/2007 / Version: 3.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to

the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.