



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: 2-ETHYLHEXYL ACRYLATE-45 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. IDENTIFICATION

Product name: 2-ETHYLHEXYL ACRYLATE-45 PPM MEHQ

Recommended use of the chemical and restrictions on use

Identified uses: Manufacture of substance, industrial Polymer production: Industrial (SU10) Uses in Coatings, industrial Use in laboratories, industrial Uses in Coatings, professional

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Flammable liquids - Category 4

Skin irritation - Category 2

Skin sensitisation - Sub-category 1B

Specific target organ toxicity - single exposure - Category 3

Label elements

Hazard pictograms



Signal word: **WARNING!**

Hazards

Combustible liquid.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements**Prevention**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.

Response

IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

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

Other hazards

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 2-ethylhexyl acrylate

This product is a substance.

Component**CASRN****Concentration**

Ethyl hexyl acrylate	103-11-7	> 99.6 %
Other ester adducts	Not Required	<= 0.5 %
Methyl ether of Hydroquinone	150-76-5	>= 10.0 - <= 20.0 PPM

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Move to fresh air. Oxygen or artificial respiration if needed. Call a physician immediately.

Skin contact: Remove contaminated clothing. Wash off with soap and plenty of water. Get prompt medical attention. Wash contaminated clothing before re-use. Do not take clothing home to be laundered.

Eye contact: Rinse with plenty of water. If eye irritation persists, consult a specialist.

Ingestion: Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water spray Dry powder Alcohol-resistant foam Carbon dioxide (CO₂)

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture

Hazardous combustion products: no data available

Unusual Fire and Explosion Hazards: Vapors can travel to a source of ignition and flash back. Heat can cause polymerization. Heated containers can explode.

Advice for firefighters

Fire Fighting Procedures: EXPLOSION HAZARD. Fight advanced fires from a protected location. Cool containers/tanks with water spray.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.

Environmental precautions: CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Do not allow material to contaminate ground water system.

Methods and materials for containment and cleaning up: Remove all sources of ignition. Ventilate the area. Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Contaminated monomer may be unstable. Add inhibitor to prevent polymerization. Absorbent can act as a contaminant (removes inhibitor) in liquid monomer. Avoid freestanding monomer with absorbent or add inhibitor to stabilize. Dispose of promptly.

7. HANDLING AND STORAGE

Precautions for safe handling: This material is a severe irritant. May cause sensitisation of susceptible persons by skin contact. For personal protection see section 8. Ground all metal containers during storage and handling.

Conditions for safe storage: Minor deviations (7C/13F) above the recommended temperature (see below) are acceptable for short periods of time (one week) for material in transit. Store in cool place. Keep away from direct sunlight. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Ground all metal containers during storage and handling. This product contains inhibitor to stabilize it during shipment and storage. The effectiveness of the inhibitor is dependent on the presence of dissolved oxygen. In order to maintain sufficient dissolved oxygen in the liquid to avoid polymerization, the monomer must always be stored with a vapor space oxygen concentration of 5% to 21%(air). Use monomer within 1 year to avoid loss of stability or risk of polymerization. Store material in containers made of the following: high density polypropylene Stainless steel polyethylene steel Carbon steel glass Aluminium Keep container tightly closed.

Storage stability

Storage temperature: ≤ 38 °C (≤ 100 °F)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Ethyl hexyl acrylate	Rohm and Haas	TWA	3 ppm
Methyl ether of	ACGIH	TWA	5 mg/m3
Hydroquinone			

Exposure controls

Engineering controls: Use explosion-proof local exhaust ventilation with a minimum capture velocity of 100 ft/min (0.5 m/sec) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of

Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Protective measures: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Individual protection measures

Eye/face protection: Chemical resistant goggles must be worn. Eye protection worn must be compatible with respiratory protection system employed.

Skin protection

Hand protection: Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation.

(Gloves of other chemically resistant materials may not provide adequate protection): Polyvinyl chloride Neoprene gloves Rinse and remove gloves immediately after use. Wash hands with soap and water. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

NOTE: Material is a possible skin sensitizer. Reference: Basic Acrylic Monomer Manufacturers, Inc., "Chemical- Protective Gloves for Acrylic Acid and Acrylate Esters", September 1999.

Other protection: Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Respiratory protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 50 times the exposure limit or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters. NOTE: Contact Rohm and Haas Company for air monitoring method.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	liquid
Color	colourless
Odor	Sweet odor
Odor Threshold	no data available
pH	no data available
Melting point/range	-90 °C (-130 °F)
Freezing point	no data available
Boiling point (760 mmHg)	215 °C (419 °F)
Flash point	86 °C (187 °F) <i>closed cup</i>
Evaporation Rate (Butyl Acetate = 1)	<1

Flammability (solid, gas)	Not applicable to liquids
Lower explosion limit	0.9 % vol
Upper explosion limit	6.4 % vol
Vapor Pressure	0.319974 mmHg at 25 °C (77 °F)
Relative Vapor Density (air = 1)	6.4
Relative Density (water = 1)	0.8861 at 20 °C (68 °F)
Water solubility	0.0096 g/L at 20 °C (68 °F)
Partition coefficient: n-octanol/water	log Pow: 4
Auto-ignition temperature	252 °C (486 °F)
Decomposition temperature	no data available
Kinematic Viscosity	no data available
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Liquid Density	0.88 g/cm ³ at 20 °C (68 °F)
Molecular weight	no data available
Surface tension	not determined

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: no data available

Possibility of hazardous reactions: Inhibitor is added to this product to prevent polymerization. However, this material can undergo hazardous polymerization. See Hazardous Polymerization for conditions to avoid.

Excessive aging, heat, contamination with polymerization catalysts, oxygen-free atmosphere, inhibitor depletion or ultraviolet light (sunlight) may cause polymerization. An uncontrolled polymerization may produce a rapid release of energy with the potential for an explosion of unvented closed containers. This material is considered stable under specified conditions of storage, shipment and/or use. See SECTION 7, Handling And Storage, for specified conditions.

Conditions to avoid: no data available

Incompatible materials: Avoid contact with the following: Acids Bases Oxidizing agents Reducing agents. UV light free radical initiators organic peroxides halogens

Hazardous decomposition products: There are no known hazardous decomposition products for this material.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat.

LD50, Rat, male and female, 4,435 mg/kg OECD 401 or equivalent

Acute dermal toxicity

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

LD50, Rabbit, 7,522 mg/kg

Acute inhalation toxicity

Prolonged excessive exposure may cause adverse effects. 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.

No deaths occurred following exposure to a saturated atmosphere.

LC50, Rat, male and female, 8 Hour, Vapour, > 1.19 mg/l

Skin corrosion/irritation

Brief contact may cause severe skin irritation with pain and local redness.

Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Corneal injury is unlikely.

Sensitization

Has caused allergic skin reactions in humans.

Has caused allergic skin reactions when tested in guinea pigs.

Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory Tract

Specific Target Organ Systemic Toxicity (Repeated Exposure)

In animals, effects have been reported on the following organs:

Respiratory tract.

Carcinogenicity

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

Teratogenicity

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. In animal studies, did not interfere with fertility.

Mutagenicity

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

Aspiration Hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

General Information

There is no data available for this product.

Toxicity**Acute toxicity to fish**

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

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, 1.81 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 1.3 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, *Desmodesmus subspicatus* (green algae), static test, 72 Hour, Growth rate inhibition, 1.71 mg/l, OECD Test Guideline 201 or Equivalent

Persistence and degradability

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

10-day Window: Pass

Biodegradation: 70 - 80 %

Exposure time: 15 d

Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 2.60 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	17 - 27 %
10 d	19 - 52 %
20 d	19 - 58 %

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals

Atmospheric half-life: 6.4 Hour

Method: Estimated.

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 4 at 25 °C

Bioconcentration factor (BCF): 270 - 282 Fish. Estimated.

Mobility in soil

Partition coefficient(Koc): 429

13. DISPOSAL CONSIDERATIONS

Disposal methods: After the addition of excess inhibitor, incinerate liquid and contaminated diking material in accordance with local, state, and federal regulations.

Contaminated packaging: Dispose of as unused product. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied. Do not burn, or use a cutting torch on, the empty drum. Pursue safe, legal methods for recycle of empty containers. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Combustible liquid, n.o.s.(2-Ethylhexyl acrylate)
UN number	NA 1993
Class	CBL
Packing group	III

Classification for SEA transport (IMO-IMDG):

Transport in bulk according to Annex I or II of MARPOL 73/78 and the	Not regulated for transport Consult IMO regulations before transporting ocean bulk
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IBC or IGC Code**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. 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 considered hazardous under 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

Acute Health Hazard
Chronic Health Hazard
Fire Hazard
Reactivity Hazard

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

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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16. OTHER INFORMATION

Other information

MONOMER END USES

Acrylic and methacrylic monomers are industrial chemicals and intended for industrial use only. They are not intended for direct consumer, medical, cosmetic, or personal uses. Exposure to high levels of acrylic or methacrylic monomer vapors may cause respiratory tract irritation, skin sensitization, or other effects.

DO NOT USE IN APPLICATIONS INVOLVING IMPLANTATION IN THE HUMAN BODY OR PROLONGED CONTACT WITH INTERNAL BODY FLUIDS OR TISSUES. DO NOT USE FOR IN-SITU POLYMERIZATIONS ON, OR ADHESION TO, ANY HUMAN BODY PART. Rohm and Haas Company's acrylic and methacrylic monomers are not designed or manufactured for these uses. Rohm and Haas Company does not recommend the use of acrylic or methacrylic monomers in medical applications or artificial fingernail extension or replacement applications. Rohm and Haas Company has neither sought, nor received, approval from the FDA or any other agency for these applications. Rohm and Haas Company has not performed technical or clinical testing on the suitability of acrylic or methacrylic monomers in uses involving prolonged contact with human tissues or in artificial fingernail extension or replacement applications. Use of unpolymerized, liquid acrylic or methacrylic monomers in artificial fingernail extension or replacement applications may result in loosening, shedding, fungal infection of nails.

ACRYLIC AND METHACRYLIC POLYMERS ARE USED SAFELY IN A WIDE VARIETY OF APPLICATIONS, INCLUDING PERSONAL CARE AND HYGIENE PRODUCTS.

If you have any questions concerning the safe use of acrylic and methacrylic monomers, please call the manufacturer.

Hazard Rating System

HMIS

Health	Flammability	Physical Hazard
3*	2	2

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 101079438 / A001 / Issue Date: 04/01/2015 / Version: 2.0

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

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Rohm and Haas	Rohm and Haas OEL's
TWA	8-hour, time-weighted average

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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.