



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: ADCOTE™ 503AC

Issue Date: 08/25/2021

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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: ADCOTE™ 503AC

Recommended use of the chemical and restrictions on use

Identified uses: Packaging laminating adhesives

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2211 H.H. DOW WAY
MIDLAND MI 48674
UNITED STATES

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids - Category 2

Eye irritation - Category 2A

Specific target organ toxicity - single exposure - Category 3

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements**Prevention**

Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing mist or vapours.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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 and/or container to an approved waste disposal plant.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Polyester resin solvent based
This product is a mixture.

Component	CASRN	Concentration
Bisphenol A-based epoxy	Not Hazardous	9.0 - 11.0 %
Polyester resin(s)	Not Hazardous	30.0 - 32.0 %

Acetone

67-64-1

59.0 - 61.0 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing. 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.

Skin contact: Wash off with plenty of water.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

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: Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: No data available

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: No data available

Advice for firefighters

Fire Fighting Procedures: No data available

Special protective equipment for firefighters: No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Environmental precautions:

Methods and materials for containment and cleaning up:

7. HANDLING AND STORAGE

Precautions for safe handling:

Conditions for safe storage:

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Acetone	Dow IHG	TWA	200 ppm
	Dow IHG	STEL	350 ppm
	ACGIH	TWA	250 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	ACGIH	STEL	500 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	OSHA Z-1	TWA	2,400 mg/m3 1,000 ppm

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Acetone	67-64-1	Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ACGIH BEI

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Avoid gloves made of: Viton. 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.

Other protection: Wear clean, body-covering clothing.

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.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	liquid clear
Color	No data available
Odor	No data available
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	56.00 °C (132.80 °F)
Flash point	closed cup -19.00 °C (-2.20 °F)
Evaporation Rate (Butyl Acetate = 1)	14.40 Acetone
Flammability (solid, gas)	Not Applicable
Flammability (liquids)	Not expected to be a static-accumulating flammable liquid.
Lower explosion limit	2.60 % vol Acetone
Upper explosion limit	12.80 % vol Acetone
Vapor Pressure	182.0000000 mmHg at 20.00 °C (68.00 °F) Acetone
Relative Vapor Density (air = 1)	2.0000 Acetone
Relative Density (water = 1)	No data available
Water solubility	No data available

Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	465.00 - 538.00 °C (869.00 - 1,000.40 °F) Acetone
Decomposition temperature	No data available
Dynamic Viscosity	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	No data available
Percent volatility	59.00 - 61.00 %

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: No data available

Conditions to avoid: No data available

Incompatible materials: No data available

Hazardous decomposition products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Information on likely routes of exposure

Ingestion, Inhalation, Skin contact, Eye contact.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, > 5,000 mg/kg Estimated.

Information for components:

Polyester resin(s)

Single dose oral LD50 has not been determined.

Acetone

LD50, Rat, 5,800 mg/kg

Acute dermal toxicity

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

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, > 2,000 mg/kg Estimated.

Information for components:

Polyester resin(s)

The dermal LD50 has not been determined.

Acetone

LD50, Rabbit, > 20,000 mg/kg

LD50, Guinea pig, > 7,400 mg/kg

Acute inhalation toxicity

As product: The LC50 has not been determined.

Information for components:

Polyester resin(s)

The LC50 has not been determined.

Acetone

LC50, Rat, 4 Hour, vapour, 76 mg/l

Skin corrosion/irritation

Based on information for component(s):

Essentially nonirritating to skin.

May cause drying and flaking of the skin.

Information for components:

Polyester resin(s)

Essentially nonirritating to skin.

Acetone

Essentially nonirritating to skin.

May cause drying and flaking of the skin.

Serious eye damage/eye irritation

Based on information for component(s):

May cause severe eye irritation.

May cause slight corneal injury.

Effects may be slow to heal.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Information for components:**Polyester resin(s)**

Essentially nonirritating to eyes.

Acetone

May cause severe eye irritation.

May cause slight corneal injury.

Effects may be slow to heal.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Information for components:**Polyester resin(s)**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

Acetone

For skin sensitization:

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

Information for components:**Polyester resin(s)**

Available data are inadequate to determine single exposure specific target organ toxicity.

Acetone

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Nervous system

Aspiration Hazard

May be harmful if swallowed and enters airways.

Information for components:

Polyester resin(s)

Based on physical properties, not likely to be an aspiration hazard.

Acetone

May be harmful if swallowed and enters airways.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Contains component(s) which have been reported to cause effects on the following organs in animals:
Blood.

Kidney.

Liver.

Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure to acetone.

Information for components:

Polyester resin(s)

No relevant data found.

Acetone

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

Blood.

Kidney.

Liver.

Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure to acetone.

Carcinogenicity

No relevant data found.

Information for components:

Polyester resin(s)

No relevant data found.

Acetone

No relevant data found.

Teratogenicity

Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

Information for components:

Polyester resin(s)

No relevant data found.

Acetone

Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Information for components:**Polyester resin(s)**

No relevant data found.

Acetone

In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative for component(s) tested.

Information for components:**Polyester resin(s)**

No relevant data found.

Acetone

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

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity**Polyester resin(s)****Acute toxicity to fish**

No relevant data found.

Acetone**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 5,500 - 6,100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

LC50, Daphnia pulex (Water flea), 48 Hour, 8,800 mg/l
LC50, Artemia salina (brine shrimp), 24 Hour, 2,100 mg/l

Acute toxicity to algae/aquatic plants

EC50, Skeletonema costatum (marine diatom), 5 d, Biomass, 11,800 - 14,400 mg/l
NOEC, Microcystis aeruginosa (blue-green algae), 8 d, Biomass, 530 mg/l

Toxicity to bacteria

IC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD 209 Test

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 28 d, number of offspring, 1,106 - 2,212 mg/l

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).
dietary LC50, Coturnix japonica (Japanese quail), > 20,000 ppm

Persistence and degradability**Polyester resin(s)**

Biodegradability: No relevant data found.

Acetone

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

10-day Window: Pass

Biodegradation: 91 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.20 mg/mg Estimated.

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	69.10%
10 d	72.70%
20 d	73.6 %

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 52 d

Method: Estimated.

Bioaccumulative potential**Polyester resin(s)**

Bioaccumulation: No relevant data found.

Acetone

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.24 Measured

Bioconcentration factor (BCF): 0.69 Fish Measured

Mobility in soil**Polyester resin(s)**

No relevant data found.

Acetone

Partition coefficient (Koc): 0.37 - 2.0 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Acetone solution
UN number	UN 1090
Class	3
Packing group	II
Reportable Quantity	Acetone

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ACETONE SOLUTION
UN number	UN 1090
Class	3
Packing group	II
Marine pollutant	No
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Acetone solution
UN number	UN 1090
Class	3
Packing group	II

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

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

Flammable (gases, aerosols, liquids, or solids)

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

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

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.

California Prop. 65

WARNING: This product can expose you to chemicals including Cumene, which is/are known to the State of California to cause cancer, and Ethylene glycol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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.

16. OTHER INFORMATION

Hazard Rating System

HMIS

Health	Flammability	Physical Hazard
2*	3	0

* = Chronic Effects (See Hazards Identification)

Revision

Identification Number: 10094484 / A001 / Issue Date: 08/25/2021 / Version: 7.0

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)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short term exposure limit
TWA	Time weighted average

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

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.

US