SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY*

Product name: ADCOTE™ 37R972

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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™ 37R972

Recommended use of the chemical and restrictions on use
Identified uses: Packaging laminating adhesives

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY*
Agent for Rohm and Haas Chemicals LLC
400 ARCOLA ROAD
COLLEGEVILLE PA 19426-2914
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 1 800 424 9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Polymers, water based
This product is a mixture.

Component	CASRN	Concentration

Ethylene/Vinyl Acetate Copolymer	Not Hazardous	24.0 - 26.0 %
Paraffin/Hydrocarbon waxes	8002-74-2	6.0 - 8.0 %
Modified rosin	Not Hazardous	5.0 - 7.0 %
Wax blend	Not Hazardous	3.0 - 5.0 %
vinyl acetate	108-05-4	< 0.07 %
Water	7732-18-5	53.0 - 55.0 %

4. FIRST AID MEASURES

Description of first aid measures
Inhalation: Move to fresh air.

Skin contact: Wash with water and soap as a precaution. If symptoms persist, call a physician.

Eye contact: Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position.

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 of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment..

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition..

Unusual Fire and Explosion Hazards: Do not allow run-off from fire fighting to enter drains or water courses..

Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ventilate the area. Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Try to prevent the material from entering drains or water courses. Do not contaminate surface water.

Methods and materials for containment and cleaning up: Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: No special handling advice required. For personal protection see section 8. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Store in a cool and dry place.

Storage stability
Other data: No decomposition if stored and applied as directed.

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
Paraffin/Hydrocarbon waxes	ACGIH	TWA	2 mg/m3
	Further information: URT irr: Upper Respiratory Tract irritation; nausea: Nausea		
	ACGIH	TWA Fumes	2 mg/m3
	Further information: URT irr: Upper Respiratory Tract irritation; nausea: Nausea		
vinyl acetate	Dow IHG	TWA	5 ppm
	Dow IHG	STEL	15 ppm
	ACGIH	TWA	10 ppm
	Further information: URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; A3: Confirmed animal carcinogen with unknown relevance to humans		
	ACGIH	STEL	15 ppm
	Further information: URT irr: Upper Respiratory Tract irritation; eye irr: Eye irritation; A3: Confirmed animal carcinogen with unknown relevance to humans		
	OSHA P0	TWA	30 mg/m3 10 ppm

	OSHA P0	STEL	60 mg/m3 20 ppm

Exposure controls
Engineering controls: Use 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.

Hygiene measures: General industrial hygiene practice.

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

Individual protection measures

Eye/face protection: Safety glasses

Skin protection

Hand protection: Protective gloves

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid
Color	cream white
Odor	acrylic-like
Odor Threshold	No data available
pH	9.5 - 10.5
Melting point/range	0 °C (32 °F) Water
Freezing point	No data available
Boiling point (760 mmHg)	100.00 °C (212.00 °F) Water
Flash point	Noncombustible
Evaporation Rate (Butyl Acetate = 1)	<1.00 Water
Flammability (solid, gas)	Not Applicable
Lower explosion limit	Not Applicable
Upper explosion limit	Not Applicable
Vapor Pressure	22.6666667 mmHg at 20.00 °C (68.00 °F) Water
Relative Vapor Density (air = 1)	<1.0000 at 20.00 °C (68.00 °F) Water
Relative Density (water = 1)	0.9800
Water solubility	partly soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not Applicable
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	54 - 55 %

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

10. STABILITY AND REACTIVITY

Reactivity: None reasonably foreseeable.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Product will not undergo polymerization.

Conditions to avoid: No data available

Incompatible materials: Avoid contact with: Bases. Oxidizers.

Hazardous decomposition products: To avoid thermal decomposition, do not overheat..

11. TOXICOLOGICAL INFORMATION

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

Information on likely routes of exposure
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
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
LD50, Rat, male and female, > 5,000 mg/kg OECD Test Guideline 401

vinyl acetate
LD50, Rat, 2,500 - 3,000 mg/kg Estimated.

Acute dermal toxicity
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
LD50, Rat, male and female, > 2,000 mg/kg OECD 402 or equivalent No deaths occurred at this concentration.

vinyl acetate
LD50, Rabbit, male, 7,440 mg/kg

Acute inhalation toxicity
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
The LC50 has not been determined.

vinyl acetate
LC50, Rat, 4 Hour, vapour, 14.084 - 15.810 mg/l

Skin corrosion/irritation
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
Brief contact is essentially nonirritating to skin.

vinyl acetate
Brief contact is essentially nonirritating to skin.
Prolonged contact may cause severe skin irritation with local redness and discomfort.
May cause rash or blisters.

Serious eye damage/eye irritation
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
Essentially nonirritating to eyes.

vinyl acetate
May cause slight eye irritation.
May cause slight corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.

Sensitization
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

vinyl acetate
Skin contact may cause an allergic skin reaction in a small proportion of individuals.
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
Available data are inadequate to determine single exposure specific target organ toxicity.

vinyl acetate
May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

Aspiration Hazard
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
Based on physical properties, not likely to be an aspiration hazard.

vinyl acetate
Based on available information, aspiration hazard could not be determined.

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)
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
In animals, effects have been reported on the following organs:
Liver.

vinyl acetate
In animals, effects have been reported on the following organs:
Lung.
Respiratory tract.

Carcinogenicity
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
Animal testing did not show any carcinogenic effects.

vinyl acetate
Vinyl acetate has caused cancer in some laboratory animals exposed to high vapor levels in long-term studies; tumors and other respiratory tract lesions occurred secondarily to chronic irritation. Vinyl acetate has caused tumors of the gastrointestinal tract in a drinking water study. Tumors occurred only at high doses, and mechanistic studies indicate that they occurred secondarily to irritation.

Carcinogenicity

Component	List	Classification
vinyl acetate	IARC	Group 2B: Possibly carcinogenic to humans
	ACGIH	A3: Confirmed animal carcinogen with unknown relevance to humans.

Teratogenicity
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

vinyl acetate
Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
For similar material(s): In animal studies, did not interfere with reproduction.

vinyl acetate
In animal studies, did not interfere with reproduction.

Mutagenicity
Product test data not available.

Information for components:

Paraffin/Hydrocarbon waxes
In vitro genetic toxicity studies were negative. For similar material(s): Animal genetic toxicity studies were negative.

vinyl acetate
In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

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

General Information
There is no data available for this product.

Toxicity

Paraffin/Hydrocarbon waxes

Acute toxicity to fish
Based on information for component(s):
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).

Acute toxicity to aquatic invertebrates
EL50, Daphnia magna (Water flea), static test, 48 Hour, > 1,000 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
For similar material(s):
NOELR, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate, > 100 mg/l, OECD Test Guideline 201

vinyl acetate

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, Pimephales promelas (fathead minnow), 96 Hour, 19 - 28 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 12.6 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 12.7 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, Bacteria, 16 Hour, 380 mg/l

Chronic toxicity to fish
NOEC, Pimephales promelas (fathead minnow), flow-through, 34 d, 0.16 mg/l

Persistence and degradability

Paraffin/Hydrocarbon waxes

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 80 %
Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

vinyl acetate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Not applicable
Biodegradation: 82 - 98 %
Exposure time: 14 d
Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 1.67 mg/mg

Chemical Oxygen Demand: 1.53 - 1.77 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	34 - 61 %
10 d	34 - 74 %
20 d	32 - 95 %

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 9.7 - 12 Hour
Method: Estimated.

Bioaccumulative potential

Paraffin/Hydrocarbon waxes

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).
Partition coefficient: n-octanol/water(log Pow): > 6 Calculated.

vinyl acetate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.73 Measured
Bioconcentration factor (BCF): 3.16 Fish Estimated.

Mobility in soil

Paraffin/Hydrocarbon waxes

No relevant data found.

vinyl acetate

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): 24 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Do not dispose of waste into sewer. For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

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):

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

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
No SARA Hazards

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
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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
1	0	0

Revision
Identification Number: 10081484 / 1001 / Issue Date: 02/14/2020 / Version: 5.3
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)
Dow IHG	Dow Industrial Hygiene Guideline
OSHA P0	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
STEL	Short term exposure limit
TWA	Time weighted average

Full text of other abbreviations
AICS - Australian Inventory of Chemical Substances; 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; 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