

Safety Data Sheet

ALDOCOAT 386 Polyurethane

SDS Revision Date:

03/10/2018



1. Identification

1.1. Product identifier

Product Identity ALDOCOAT 386 Polyurethane
Alternate Names ALDOCOAT 386 Polyurethane

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use Polyurethane Coating
Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Aldo Products Company, Inc.
1320 Litton Drive
Salisbury, NC 28147

Emergency

24 hour Emergency Telephone No. 800-535-5053
Customer Service: Aldo Products Company, Inc. 704-932-3054

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 4;H332	Harmful if inhaled.
Skin Irrit. 3;H316	Causes mild skin irritation. (Not adopted by US OSHA)
Eye Irrit. 2;H319	Causes serious eye irritation.
Skin Sens. 1;H317	May cause an allergic skin reaction.
Resp. Sens. 1;H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Repr. 2;H361	Suspected of damaging fertility or the unborn child.
STOT RE 2;H373	May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (hearing organs)
Aspir. 1; H304	May be fatal if swallowed and enters airways.
Flam. Liq. 3;H225	Highly Flammable liquid and vapor.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



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Danger

H225 Highly flammable liquid and vapor.
H316 Causes mild skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

[Prevention]:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308+313 IF exposed or concerned: Get medical advice / attention.
P314 Get Medical advice / attention if you feel unwell.
P321 Specific treatment (see information on this label).
P331 Do NOT induce vomiting.
P333+313 If skin irritation or a rash occurs: Get medical advice / attention.
P337+313 If eye irritation persists: Get medical advice / attention.
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

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[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Polyoxypropylene glycol CAS Number: 0025322-69-4	25 - 50	Not Classified	[1]
Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl- CAS Number: 0004098-71-9	10 - 25	Acute Tox. 3;H331 Eye Irrit. 2;H319 STOT SE 3;H335 Skin Irrit. 2;H315 Resp. Sens. 1;H334 Skin Sens. 1;H317 Aquatic Chronic 2;H411	[1][2]
Titanium dioxide CAS Number: 0013463-67-7	10 - 25	Not Classified	[1][2]
Aliphatic Hydrocarbon CAS Number: 0064742-49-0	10 - 25	Asp. Tox. 1;H304	[1]
HDI Homopolymer CAS Number: 0028182-81-2	10 - 25	Skin Sens. 1;H317 Resp. Sens. 1;H334	[1]
Xylene CAS Number: 0001330-20-7	1.0 - 10	Flam. Liq. 3;H226 Acute Tox. 4;H332 Acute Tox. 4;H312 Skin Irrit. 2;H315	[1][2]
Ethyl Benzene CAS Number: 0000100-41-4	1.0 - 10	Flam. Liq. 2;H225 Acute Tox. 4;H332 STOT RE 2;H373 Asp. Tox. 1;H304	[1][2]
Fatty Acid Amide CAS Number: Proprietary	1.0 - 10	Aquatic Chronic 2;H411	[1]
Tosyl isocyanate CAS Number: 0004083-64-1	0.10 - 1.0	Eye Irrit. 2;H319 STOT SE 3;H335 Skin Irrit. 2;H315 Resp. Sens. 1;H334	[1]
Dimethyltindineodeconoate CAS Number: 0068928-76-7	0.10 - 1.0	Acute Tox. 4;H302 Repr. 2;H361 STOT RE 1;H372	[1]
2-N-octyl-4-isothiazoline-3-one CAS Number: 0026530-20-1	0.10 - 1.0	Acute Tox. 3;H331 Acute Tox. 3;H311 Acute Tox. 4;H302 Skin Corr. 1B;H314	[1]

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		Skin Sens. 1;H317 (@>0.05%) Aquatic Acute 1;H400 Aquatic Chronic 1;H410	
1,6-Hexamethylene Diisocyanate CAS Number: 0000822-06-0	0.10 - 1.0	Acute Tox. 3;H331 Eye Irrit. 2;H319 STOT SE 3;H335 Skin Irrit. 2;H315 Resp. Sens. 1;H334 Skin Sens. 1;H317	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

- General** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
- Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
- Eyes** Get medical attention immediately.
- Skin** Remove contaminated clothing and shoes/boots. Wash affected area with alcohol. Don't wash with water.
- Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

- Overview** Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
- Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.
- Inhalation** Harmful if inhaled. May cause allergy or asthma symptoms of breathing difficulties if inhaled.
- Eyes** Causes serious eye irritation.
- Skin** May cause an allergic skin reaction. Causes mild skin irritation. (Not adopted by US OSHA)

5. Fire-fighting measures

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5.1. Extinguishing media

Water, carbon dioxide, foam or dry powder.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Reaction with water can create CO₂.

Avoid breathing dust / fume / gas / mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

5.3. Advice for fire-fighters

Use water spray to cool non-involved containers.

Wear SCBA with full-face piece operating in a positive pressure demand mode and full protective gear.

This product is considered combustible and is a fire hazard. During a fire isocyanate vapors and other irritating gases may be generated by thermal decomposition or combustion. At temperatures above 137°F it can cause pressure build-up in closed containers. Use cold water to cool fire-exposed containers.

ERG Guide No. 127

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8. Contain and absorb spillage with non-combustible materials e.g. sand, earth, vermiculite. Place in a suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (d:0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts), water (95 parts). Add the same decontaminant to any residues and allow to stand for several days in a non-sealed container until no

further reaction occurs. Once this stage is reached, close container and dispose of in accordance with the waste regulations (see section 13). Do not allow spills to enter drains or watercourses. If drains or sewers are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

7. Handling and storage

7.1. Precautions for safe handling

Avoid prolonged or repeated skin contact. Avoid breathing aerosols, spray mists, and heated vapors. Use only in well

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ventilated area. Use good personal and industrial hygiene practices.

Keep container closed after each use.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Precautions should be taken to minimize exposure to atmospheric humidity or water as carbon dioxide may be formed which, in closed containers can result in pressurization. Care should be taken when re-opening partly used containers.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons applying this preparation.

Incompatible materials: Contact with water will cause this product to cure. Incompatible with acids, bases, and oxidizers

Recommended storage range is less than 90°F.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000100-41-4	Ethyl Benzene	OSHA	TWA 100 ppm (435 mg/m ³) STEL 125 ppm
		ACGIH	TWA: 20 ppm ^{2B} , Revised 2011,
		NIOSH	TWA 100 ppm (435 mg/m ³) ST 125 ppm (545 mg/m ³)
0000822-06-0	1,6-Hexamethylene Diisocyanate	ACGIH	TWA: 0.005 ppm Ceiling: 0.01 ppm ^S
		NIOSH	TWA 0.005 ppm (0.035 mg/m ³) C 0.020 ppm (0.140 mg/m ³) [10-minute]
0001330-20-7	Xylene	OSHA	STEL 150 ppm
		ACGIH	TWA: 100 ppm STEL: 150 ppm
0004098-71-9	Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-	ACGIH	TWA: 0.005 ppm Ceiling: 0.01 ppm ^S
		NIOSH	TWA 0.005 ppm (0.045 mg/m ³) ST 0.02 ppm (0.180 mg/m ³) [skin]

8.2. Exposure controls

Respiratory

When concentrations exceed the exposure limits shown above workers must wear appropriate respirators approved in accordance with Directive 89/656/EEC and the Personal Protection Equipment Regulations. Provision of other controls such as exhaust

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ventilation should be considered if practical.

An air fed respirator must be worn when applying this product in a confined space. Even in open spaces, an air fed respirator should be worn when spraying.

If applying by brush or roller in an open, well ventilated area, air fed respirators could be replaced by a charcoal filter mask.

Eyes Chemical splash goggles (ANSI Z-87.1 or approved equivalent) and/or face shield. Have an eye wash station available.

Skin Avoid all skin contact by covering as much of the exposed skin area as possible with appropriate clothing. Wear impervious gloves.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Provide adequate ventilation. This should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by spray operators even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapor below the WEL, suitable respiratory protection must be worn. (See Personal Protection)

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Viscous Liquid
Odor	Not specified
Odor threshold	Not determined
pH	Not available
Melting point / freezing point	Not available
Initial boiling point and boiling range	281 - 284°F
Flash Point	80°F
Evaporation rate (Ether = 1)	Slower than ether
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: 1% Upper Explosive Limit: 7%
Vapor pressure (Pa)	Not established

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Vapor Density	Not available
Specific Gravity	Not available
Solubility in Water	Nil, reacts with water
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not established
Decomposition temperature	Not available
Viscosity (cSt)	2,000 - 40,000 cps
VOC Content	< 250 g/liter
Density	8 - 11 pounds per gallon
% Volatile	< 26% (by volume)

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

May polymerize if mixed with water.

10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide may be produced.

Keep away from oxidizing agents, strongly alkaline and strongly acid materials, amines, alcohols and water. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water resulting in evolution of carbon dioxide. In closed containers, pressure build up could result in distortion, blowing, and in extreme cases, bursting of the container.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Excessive heat and open flame.

10.5. Incompatible materials

Contact with water will cause this product to cure. Incompatible with acids, bases, and oxidizers

10.6. Hazardous decomposition products

Reaction with water can create CO₂.

11. Toxicological information

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue,

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muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Based on the properties of the isocyanate content of this product, respiratory exposure may cause acute irritation and/or sensitization of the respiratory system resulting in asthmatic symptoms, wheezing and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to airborne concentrations of isocyanates well below the occupational exposure limit. Repeated exposure may lead to permanent respiratory disability.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Polyoxypropylene glycol - (25322-69-4)	2,000.00, Rat - Category: 4	No data available	No data available	No data available	No data available
Xylene - (1330-20-7)	4,299.00, Rat - Category: 5	1,548.00, Rabbit - Category: 4	No data available	20.00, Rat - Category: NA	5,000.00, Rat - Category: 4
Ethyl Benzene - (100-41-4)	3,500.00, Rat - Category: 5	15,433.00, Rabbit - Category: NA	17.20, Rat - Category: 4	No data available	4,000.00, Rat - Category: NA
2-N-octyl-4-isothiazoline-3-one - (26530-20-1)	550.00, Rat - Category: 4	690.00, Rabbit - Category: 3	No data available	0.27, Rat - Category: 2	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000100-41-4	Ethyl Benzene	IARC	Group 2b: Yes
0001330-20-7	Xylene	IARC	Group 3: Yes
0013463-67-7	Titanium dioxide	IARC	Group 2b: Yes

12. Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Polyoxypropylene glycol - (25322-69-4)	650.00, Menidia beryllina	Not Available	Not Available

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Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl- - (4098-71-9)	4.00, Chaetogammarus marinus	83.70, Daphnia magna	118.70 (72 hr), Scenedesmus subspicatus
Aliphatic Hydrocarbon - (64742-49-0)	Not Available	2.60, Chaetogammarus marinus	Not Available
HDI Homopolymer - (28182-81-2)	100.00, Danio rerio	100.00, Daphnia magna	100.00 (72 hr), Scenedesmus subspicatus
Xylene - (1330-20-7)	3.30, Oncorhynchus mykiss	8.50, Palaemonetes pugio	100.00 (72 hr), Chlorococcales
Ethyl Benzene - (100-41-4)	4.20, Oncorhynchus mykiss	2.93, Daphnia magna	3.60 (96 hr), Pseudokirchneriella subcapitata
2-N-octyl-4-isothiazoline-3-one - (26530-20-1)	0.0555, Oncorhynchus mykiss	0.18, Daphnia magna	0.084 (72 hr), Scenedesmus subspicatus
1,6-Hexamethylene Diisocyanate - (822-06-0)	82.80, Danio rerio	89.10, Daphnia magna	77.40 (72 hr), Desmodesmus subspicatus

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1263	UN1263	UN1263
14.2. UN proper shipping name	UN1263, Paint, 3, III	Paint	Paint
14.3. Transport hazard class(es)	DOT Hazard Class: 3	IMDG: 3 Sub Class: Not Applicable	Air Class: 3
14.4. Packing group	III	III	III

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14.5. Environmental hazards

IMDG Marine Pollutant: Yes (Aliphatic Hydrocarbon)

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification D2A

US EPA Tier II Hazards

Fire: No

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes

Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs (lbs):

Ethyl Benzene (1,000.00)

Xylene (100.00)

EPCRA 302 Extremely Hazardous:

Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-

EPCRA 313 Toxic Chemicals:

1,6-Hexamethylene Diisocyanate

Ethyl Benzene

Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-

Xylene

Proposition 65 - Carcinogens (>0.0%):

Ethyl Benzene

Titanium dioxide

New Jersey RTK Substances (>1%):

Ethyl Benzene

Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-

Titanium dioxide

Xylene

Pennsylvania RTK Substances (>1%):

Ethyl Benzene

Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-

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Titanium dioxide

Xylene

16. Other information

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