



Certificate of Analysis

Air Products and Chemicals, Inc.
 7201 Hamilton Blvd.
 ALLENTOWN PA 18195-1501
 USA
 Tel: (610)481-4911
 Date Printed: 13 NOV 2014

Net Weight: 195.000 kg

Material 151101 ANCAMINE® 2678 Curing Agent	Mfg. Date 08 SEP 2014	Analysis Date 09 SEP 2014	Best if Used By 08 SEP 2016
Batch 1841845	Source Location 5217		

LOWER LIMIT	UPPER LIMIT	NOMINAL VALUE	ACTUAL VALUE	UNIT	EXPANDED UNCERT.	NO REPS STD DEV	ANALYTICAL		
							PHASE	FREQ	METHOD
Amine Value									
1220	1320		1250	mgKOHg			B		Titration
Viscosity @ 25°C									
20	50		35	mPas			B		Viscometer
Color, Gardner									
	3		0	Gardne			B		Colorimeter
Gel Time									
	10		20	min			B		Gel Timer
Water Content									
	2.0		0.9	%			B		Karl Fischer

This certificate is issued electronically and is valid without a signature.

REMARKS:

B=Batch Analyzed
 "Ancamine" - registered TM of Air Products & Chemicals, Inc.
 This certifies that material carries the lot number listed.
 This certifies that material has the properties shown.

Safety Data Sheet

Version 3.1

Revision Date 12/18/2014

SDS Number 30000023466

Print Date 03/07/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ANCAMINE[®] 2678 Curing Agent

Product Use Description : Curing Agent

Manufacturer/Importer/Distributor : Air Products and Chemicals, Inc
7201 Hamilton Blvd.
Allentown, PA 18195-1501
GST No. 123600835 RT0001
QST No. 102753981 TQ0001

Telephone : 1-610-481-4911 Corporate
1-800-345-3148 Chemicals Cust Serv
1-800-752-1597 Gases/Electronics Cust Serv

Emergency telephone number (24h) : 800-523-9374 USA
+1 610 481 7711 International

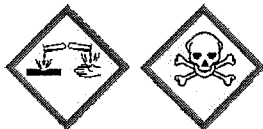
2. HAZARDS IDENTIFICATION

GHS classification

Acute toxicity - Oral Category 4
Acute toxicity - Dermal Category 3
Skin corrosion - Category 1B
Serious Eye Damage - Category 1
Skin sensitization - Category 1

GHS label elements

Hazard pictograms/symbols



Signal Word: Danger

Hazard Statements:

H302:Harmful if swallowed.

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H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.

Precautionary Statements:

Prevention : P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response : P301+P312 :IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331 :IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 :IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 :IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 :IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 :Immediately call a POISON CENTRE or doctor/physician.
P333+P313 :If skin irritation or rash occurs: Get medical advice/attention.
P363 :Wash contaminated clothing before reuse.

Storage : P405: Store locked up.

Disposal : P501: Disposal of contents/container to be specified in accordance with regulations.

Hazards not otherwise classified

Harmful if swallowed.
Toxic in contact with skin.
Corrosive
Causes severe skin burns and eye damage.
May cause sensitization by skin contact.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Aliphatic Amines	Not Available	> 80%

The composition is trade secret. CHEMICAL FAMILY: Amine

4. FIRST AID MEASURES

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- General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
- Eye contact : Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.
- Skin contact : Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Flush immediately with copious amounts of water. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.
- Ingestion : Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Prevent aspiration of vomit. Turn victim's head to the side.
- Inhalation : Move to fresh air.
- Most important symptoms/effects - acute and delayed : Eye disease. Skin disorders and Allergies.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam.
Carbon dioxide (CO₂).
Dry chemical.
Dry sand.
Limestone powder.
- Specific hazards : Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.
- Special protective equipment for fire-fighters : Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations., Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions, Protective Equipment, and Emergency Procedures : Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.

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- Environmental precautions : Construct a dike to prevent spreading.
- Methods for cleaning up : Approach suspected leak areas with caution. Contact Air Products' Emergency Response Center for advice. Place in appropriate chemical waste container.
- Additional advice : If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Do not store near acids. Keep away from alkalis. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

- Respiratory protection : Not required for properly ventilated areas.
- Hand protection : Butyl-rubber
Nitrile rubber.
Neoprene gloves.
Impervious gloves.
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection : Full face shield with goggles underneath.
- Skin and body protection : Impervious clothing.
Rubber or plastic boots.
Slicker Suit.
- Special instructions for protection and hygiene : Discard contaminated leather articles. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Launder or discard

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contaminated clothing. Provide readily accessible eye wash stations and safety showers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid. Colorless.
Odor	: Fishy.
Odor threshold	: No data available.
pH	: Alkaline.
Melting point/range	: No data available.
Boiling point/range	: 597 °F (314 °C)
Flash point	: > 230 °F (> 110 °C)
Evaporation rate	: No data available.
Flammability (solid, gas)	: Not applicable.
Upper/lower explosion/flammability limit	: Not applicable.
Vapor pressure	: 1.00 mmHg at 70 °F (21 °C)
Water solubility	: Completely soluble.
Relative vapor density	: Not applicable.
Relative density	: 0.948
Partition coefficient (n-octanol/water)	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Viscosity	: 35 mPa.s at 77 °F (25 °C)
Molecular Weight	: No data available.
Density	: 59.307 lb/ft ³ (0.95 g/cm ³) at 70 °F (21.1 °C) 58.058 lb/ft ³ (0.93 g/cm ³) at 130 °F (54.5 °C)

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10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to avoid	: No data available.
Materials to avoid	: Reducing agents. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents.
Hazardous decomposition products	: Nitric acid. Ammonia Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO ₂). Organic acid vapors.
Possibility of hazardous Reactions/Reactivity	: No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely routes of exposure

Effects on Eye	: Causes eye burns. May cause blindness.
Effects on Skin	: Toxic in contact with skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Causes skin burns.
Inhalation Effects	: Can cause severe eye, skin and respiratory tract burns. Inhalation of aerosol may cause irritation to the upper respiratory tract.
Ingestion Effects	: Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Symptoms	: No data available.

Acute toxicity

Acute Oral Toxicity : LD50 : 1,000 - 2,000 mg/kg Species : Rat. Method : Estimated.

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Inhalation : No data is available on the product itself.

Acute Dermal Toxicity : No data is available on the product itself.

Acute Dermal Toxicity - Components

Aliphatic Amines

LD50 : > 200 mg/kg

Species : Rabbit.

Skin corrosion/irritation : No data available.

Serious eye damage/eye irritation : No data available.

Sensitization. : May cause sensitization by skin contact.

Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.

Reproductive toxicity : No data is available on the product itself.

Germ cell mutagenicity : No data is available on the product itself.

Specific target organ systemic toxicity (single exposure) : No data available.

Specific target organ systemic toxicity (repeated exposure) : No data available.

Aspiration hazard : No data available.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic skin reaction. Eye disease., Skin disorders and Allergies.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to other organisms : No data available.

Persistence and degradability

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Biodegradability : No data is available on the product itself.
Mobility : No data available.
Bioaccumulation : No data is available on the product itself.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : Contact supplier if guidance is required.
Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

DOT

UN/ID No. : UN2927
Proper shipping name : Toxic liquids, corrosive, organic, n.o.s., (Aliphatic Amines)
Class or Division : 6.1
Packing group : II
Label(s) : 6.1 (8)
Marine Pollutant : No

IATA

UN/ID No. : UN2927
Proper shipping name : Toxic liquid, corrosive, organic, n.o.s., (Aliphatic Amines)
Class or Division : 6.1
Packing group : II
Label(s) : 6.1 (8)
Marine Pollutant : No

IMDG

UN/ID No. : UN2927
Proper shipping name : TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S., (Aliphatic Amines)
Class or Division : 6.1
Packing group : II
Label(s) : 6.1 (8)
Marine Pollutant : No

TDG

UN/ID No. : UN2927
Proper shipping name : TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S., (Aliphatic Amines)
Class or Division : 6.1
Packing group : II

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Label(s) : 6.1 (8)
Marine Pollutant : No

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact an Air Products customer service representative.

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

16. OTHER INFORMATION

HMIS Rating

Health : 3
Flammability : 1
Physical hazard : 0

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REVISION NOTES : 14. TRANSPORT INFORMATION
SECTION 2: Hazards identification

Prepared by : Air Products and Chemicals, Inc. Global EH&S Product Safety Department

Telephone : 1-610-481-4911 Corporate
1-800-345-3148 Chemicals Cust Serv
1-800-752-1597 Gases/Electronics Cust Serv

Preparation Date : 03/07/2015

For additional information, please visit our Product Stewardship web site at
<http://www.airproducts.com/productstewardship/>
