



CAMEO Chemicals



SDMS DocID

2085813

Chemical Reactivity

Substances In The Mix

1. TRIETHYLAMINE
2. HYDROCHLORIC ACID, MIXTURE

Hazard Predictions If These Chemicals Mix

- Exothermic reaction. May generate heat and/or cause pressurization.
- Reaction may be intense or violent.

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Chemical data sheet for:

ACETONITRILE

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Section 1 - Chemical Identifiers

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CAS Number	UN/NA Number	STCC Number	CHRIS Code
75-05-8	1648	4909202	ATN

NFPA 704: **DOT Hazard Label:** FLAMMABLE LIQUID

3

2 0

General Description

A colorless limpid liquid with an aromatic odor. Flash point 42°F. Density 0.783 c / cm³. Toxic by skin absorption. Less dense than water. Vapors are denser than air. (NOAA, 2003)

Section 2 - Hazards

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Reactivity Alerts

 Highly Flammable

Air & Water Reactions

Highly flammable. Water soluble.

Fire Hazard

Special Hazards of Combustion Products: Toxic vapors are generated when heated

Behavior in Fire: Vapor heavier than air and may travel a considerable distance to a source of

ignition and flash back. (USCG, 1999)

Health Hazard

Exposure to 160 ppm for 4 hours causes flushing of the face and a feeling of constriction in the chest; 500 ppm for brief periods is irritating to the nose and throat. Severe exposures cause irritability, skin eruptions, confusion, delirium, convulsions, paralysis, and death due to central nervous system depression. (USCG, 1999)

Reactivity Profile

ACETONITRILE decomposes when heated to produce deadly toxic hydrogen cyanide gas and oxides of nitrogen. Strongly reactive [Hawley]. May react vigorously with strong oxidizing reagents, sulfuric acid, chlorosulfonic acid, sulfur trioxide, perchlorates, nitrating reagents, and nitric acid. [Sax, 9th ed., 1996, p. 20]. Potentially explosive in contact with nitrogen-fluorine compounds (e.g., tetrafluorourea) [Fraser, G. W. et al., Chem. Comm., 1966, p. 532]. (REACTIVITY, 2003)

Belongs to reactive group(s)

- Nitriles

Section 3 - Response Recommendations

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Fire Fighting

Do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide. ((c) AAR, 2003)

Non-Fire Response

Keep sparks, flames, and other sources of ignition away. Keep material out of water sources and sewers. Build dikes to contain flow as necessary. Attempt to stop leak if without undue personnel hazard. Use water spray to disperse vapors and dilute standing pools of liquid. ((c) AAR, 2003)

Protective Clothing

Skin: Wear appropriate personal protective clothing to prevent skin contact.

Eyes: Wear appropriate eye protection to prevent eye contact.

Wash skin: The worker should immediately wash the skin when it becomes contaminated.

Remove: Work clothing that becomes wet should be immediately removed due to its flammability hazard (i.e. for liquids with flash point < 100°F)

Change: No recommendation is made specifying the need for the worker to change clothing after the work shift.

Provide: Facilities for quickly drenching the body should be provided within the immediate work area for emergency use where there is a possibility of exposure. [Note: It is intended that these facilities provide a sufficient quantity or flow of water to quickly remove the substance from any body areas likely to be exposed. The actual determination of what constitutes an adequate quick drench facility depends on the specific circumstances. In certain instances, a deluge shower should be readily available, whereas in others, the availability of water from a sink or hose could be considered adequate.] (NIOSH, 2003)

First Aid

EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.

INGESTION: DO NOT INDUCE VOMITING. Volatile chemicals have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital. (NTP, 1992)

Section 4 - Physical Properties

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Molecular Formula: CH₃CN

Flash Point: 42.0 ° F (NTP, 1992)

Lower Explosive Limit: 4.4 % (NTP, 1992)

Upper Explosive Limit: 16.0 % (NTP, 1992)

Auto Ignition Temperature: 975.0 ° F (USCG, 1999)

Melting Point: -49.0 ° F (NTP, 1992)

Vapor Pressure: 73.0 mm Hg at 68.0 ° F (NTP, 1992)

Vapor Density: 1.42 (NTP, 1992)

Specific Gravity: 0.787 at 68.0 ° F (USCG, 1999)

Boiling Point: 178.9 ° F at 760 mm Hg (NTP, 1992)

Molecular Weight: 41.05 (NTP, 1992)

Water Solubility: greater than or equal to 100 mg/mL at 72.5° F (NTP, 1992)

AEGL: data unavailable

ERPG: use TEEL data

TEEL-1

60.0 ppm
(TEEL, 2005)

TEEL-2

60.0 ppm

TEEL-3

500.0 ppm

IDLH: 500.0 ppm (NIOSH, 2003)

Section 5 - Regulatory Information

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Regulatory Names

- ACETONITRILE

CAA RMP: Not a regulated chemical.

CERCLA: Regulated chemical with a Reportable Quantity of 5000 pounds.

EPCRA 302 EHS: Not a regulated chemical.

TRI (EPCRA 313): Regulated chemical.

RCRA chemical code: U003

Section 6 - Alternate Chemical Names

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- ACÉTONITRILE (DOT FRENCH)
- ACETONITRILE CLUSTER
- ACETONITRILLO (DOT SPANISH)
- CIANURO DE METILO (DOT SPANISH)
- CYANOMETHANE
- CYANURE DE MÉTHYLE (DOT FRENCH)
- ETHANENITRILE
- ETHYL NITRILE
- METHANE, CYANO-
- METHANECARBONITRILE
- METHYL CYANIDE
- METHYL CYANIDE (MECN)
- NA 1648
- NCI-C60822

- RCRA WASTE NUMBER U003
- UN 1648
- USAF EK-488

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TRIETHYLAMINE

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CAS Number	UN/NA Number	STCC Number	CHRIS Code
121-44-8	1296	4907877	TEN

NFPA 704:
 3
 3 0

DOT Hazard Label: FLAMMABLE LIQUID
CORROSIVE

General Description

A clear colorless liquid with a strong ammonia to fish-like odor. Flash point 20°F. Vapors irritate the eyes and mucous membranes. Less dense (6.1 lb / gal) than water. Vapors heavier than air. Produces toxic oxides of nitrogen when burned. (REACTIVITY, 2003)

Section 2 - Hazards

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Reactivity Alerts

 Highly Flammable

Air & Water Reactions

Highly flammable. Soluble in water.

Fire Hazard

Flammable/combustible material. May be ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are

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Chemical data sheet for:

HYDROCHLORIC ACID, MIXTURE

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chemicals: 0

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Section 1 - Chemical Identifiers

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7647-01-0

UN/NA Number

1789

STCC Number

none

CHRIS Code

none

NFPA 704:**DOT Hazard Label:** CORROSIVE

NO CODES

General Description

No information available.

Section 2 - Hazards

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Reactivity Alerts

 Air-Reactive

Air & Water Reactions

It is soluble in water with release of heat. Fumes in air.

Fire Hazard

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Substance will react with water (some violently), releasing corrosive and/or toxic gases. Reaction with water may generate much heat which will increase the concentration of

fumes in the air. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated or if contaminated with water. (DOT, 2000)

Health Hazard

TOXIC; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death. Reaction with water or moist air will release toxic, corrosive or flammable gases. Reaction with water may generate much heat which will increase the concentration of fumes in the air. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. (DOT, 2000)

Reactivity Profile

HYDROCHLORIC ACID MIXTURE contains an aqueous solution of hydrogen chloride, an acidic gas. Reacts exothermically with organic bases (amines, amides) and inorganic bases (oxides and hydroxides of metals). Reacts exothermically with carbonates (including limestone and building materials containing limestone) and hydrogen carbonates to generate carbon dioxide. Reacts with sulfides, carbides, borides, and phosphides to generate toxic or flammable gases. Reacts with many metals (including aluminum, zinc, calcium, magnesium, iron, tin and all of the alkali metals) to generate flammable hydrogen gas. Reacts violently with acetic anhydride, 2-aminoethanol, ammonium hydroxide, calcium phosphide, chlorosulfonic acid, 1,1-difluoroethylene, ethylenediamine ethyleneimine, oleum, perchloric acid, b-propiolactone, propylene oxide, silver perchlorate/carbon tetrachloride mixture, sodium hydroxide, uranium(IV) phosphide, vinyl acetate, calcium carbide, rubidium carbide, cesium acetylide, rubidium acetylide, magnesium boride, mercury(II) sulfate [Lewis]. Mixtures with concentrated sulfuric acid can evolve toxic hydrogen chloride gas at a dangerous rate. Undergoes a very energetic reaction with calcium phosphide [Mellor 8:841(1946-1947)]. (REACTIVITY, 2003)

Belongs to reactive group(s)

- Acids, Inorganic Non-oxidizing

Section 3 - Response Recommendations

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Fire Fighting

Note: Most foams will react with the material and release corrosive/toxic gases.

SMALL FIRES: CO2 (except for Cyanides), dry chemical, dry sand, alcohol-resistant foam.

LARGE FIRES: Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk. Use water spray or fog; do not use straight streams. Dike fire control water for later disposal; do not scatter the material.

FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (DOT, 2000)

Non-Fire Response

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. DO NOT GET WATER INSIDE CONTAINERS. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. Prevent entry into waterways, sewers, basements or confined areas.

SMALL SPILLS: Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal. (DOT, 2000)

Protective Clothing

No information available.

First Aid

Move victim to fresh air. Call 911 or emergency medical service. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin. Keep victim warm and quiet. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. (DOT, 2000)

Section 4 - Physical Properties

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Molecular Formula: CIH

Flash Point: data unavailable

Lower Explosive Limit: data unavailable

Upper Explosive Limit: data unavailable

Auto Ignition Temperature: data unavailable

Melting Point: data unavailable

Vapor Pressure: data unavailable

Vapor Density: data unavailable

Specific Gravity: data unavailable

Boiling Point: data unavailable

Molecular Weight: data unavailable

Water Solubility: data unavailable

AEGL: data unavailable

ERPG-1

3.0 ppm

((c) AIHA, 2003)

ERPG-2

20.0 ppm

ERPG-3

150.0 ppm