

## SAFETY DATA SHEET

Preparation Date: 07/25/2019

Revision date 07/25/2019

Revision Number: G1

### 1. IDENTIFICATION

#### Product identifier

**Product code:** A1037  
**Product Name:** ADIPYL CHLORIDE, REAGENT

#### Other means of identification

**Synonyms:** Adipoyl dichloride  
**CAS #:** 111-50-2  
**RTECS #** Not available  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 4

#### Label elements

**Danger**

#### **Hazard statements**

Causes severe skin burns and eye damage  
 Combustible liquid



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Reacts with water to evolve heat

**Precautionary Statements - Prevention**

Do not breathe mist or vapors

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Keep away from heat/sparks/open flames/hot surfaces. — No smoking

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or physician*

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Adipyl Chloride	111-50-2	100

**4. FIRST AID MEASURES**

**First aid measures**

**General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

**Skin Contact:**

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or poison control center immediately.

**Eye Contact:**

Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation 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. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Causes severe skin burns  
Causes eye irritation  
May cause coughing and shortness of breath  
Headache  
Nausea

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Alcohol-resistant foam.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). hydrogen chloride gas.

**Specific hazards** Combustible material. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Container explosion may occur under fire conditions or when heated. When heated to decomposition it emits acrid smoke and irritating fumes. May be ignited by heat, sparks or flames.

**Special Protective Actions for Firefighters**

**Specific Methods:** Water mist may be used to cool closed containers For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Do not allow contact with water. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly. Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical Measures/Precautions:**

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials. All equipment used when handling the product must be grounded. Remove all sources of ignition.

**Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice. Keep away from heat and sources of ignition.

### Conditions for safe storage, including any incompatibilities

**Technical Measures/Storage Conditions:**

Moisture sensitive. Keep refrigerated. Store at 2-8 deg. C. Keep container tightly closed in a dry and well-ventilated place. Store in a segregated and approved area. Store away from incompatible materials.

**Incompatible Materials:**

Water  
Oxidizing agents  
Strong bases  
Alcohols

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Adipyl Chloride	111-50-2	None	None	None	None

## Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Adipyl Chloride	111-50-2	None	None	None	None

## Australia and Mexico

Component	CAS No	Australia	Mexico
Adipyl Chloride	111-50-2	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields.
- Skin and body protection:** Long sleeved clothing  
Chemical resistant apron  
Gloves  
Boots
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Pale Yellow.
<b>Odor:</b> No information available.	<b>Taste</b> No information available.	<b>Formula</b> C6H8O2Cl2
<b>Molecular/Formula weight (g/mole):</b> 183.03	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> 72°C (161.6°F) 110°C (230°F)
<b>Flash Point Tested according to:</b> Closed cup Open cup	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 106°C (222.8°F)	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 1.26	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

Reacts with water to release heat and corrosive gas

### Chemical stability

**Stability:** Moisture Sensitive. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Incompatible materials. Exposure to moisture. Moisture sensitive. Excess Heat.

**Incompatible Materials:**  
Water  
Oxidizing agents  
Strong bases  
Alcohols

**Hazardous decomposition products:** Carbon oxides. Hydrogen chloride.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion. Inhalation.

### Acute Toxicity

### Component Information

Adipyl Chloride	
CAS No	111-50-2

**LD50/oral/rat** = No information available  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

**Product Information**

**LD50/oral/rat =**  
**Value - Acute Toxicity =** No information available

**LD50/oral/mouse =**  
**Value - Acute Tox =** No information available

**LD50/dermal/rabbit**  
**Value - Acute Toxicity =** No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox =** No information available

**LC50/inhalation/rat**  
**VALUE-Vapor =** No information available  
**VALUE-Gas =** No information available  
**VALUE-Dust/Mist =** No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor =** No information available  
**VALUE - Gas =** No information available  
**VALUE - Dust/Mist =** No information available

**Symptoms**

**Skin Contact:** Causes skin burns.

**Eye Contact:** Causes serious eye damage.

**Inhalation** May cause irritation of respiratory tract. Symptoms may include coughing and shortness of breath.

**Ingestion** May cause digestive (gastrointestinal) tract irritation. May cause nausea. May cause headache.

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** No information available.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Adipyl Chloride	111-50-2	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available  
**Other adverse effects** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**  
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**  
Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Adipyl Chloride	111-50-2	None	None	None	None

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.  
**Hazard Class** 8  
**Subsidiary Class** No information available  
**Packing group:** III  
**Emergency Response Guide Number** 153

**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions** IB3, T7, TP1, TP28  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

**TDG (Canada)**  
**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant** No Information available  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

**ADR**  
**UN Number** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.  
**Transport hazard class(es)** 8  
**Packing group** III  
**Subsidiary Risk:** No information available  
**Special Provisions** 274  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

**IMDG**  
**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant** No information available  
**EMS:** F-A  
**Special Provisions** 223, 274  
**Description** UN3265, Corrosive liquid, acidic, organic, n.o.s. (ADIPYL CHLORIDE), 8, III

**RID**  
**UN Number** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.  
**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** III  
**Special Provisions** 274  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

**ICAO (air)**  
**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III  
**Special Provisions** A3

**IATA**  
**UN Number** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s.

**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** III  
**Precautionary Statements - Response** 8L  
**Special Provisions** No information available  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s., 8, III

## 15. REGULATORY INFORMATION

### International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
<i>Adipyl Chloride</i>	111-50-2	PresentACTIVE	Not present	Present	Present (2)-2563	Present	Present	Present 203-876-4

### U.S. Regulations

#### *Adipyl Chloride*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 4192  
**Pennsylvania RTK:** Present

#### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

##### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

##### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Adipyl Chloride</i>	111-50-2	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>Adipyl Chloride</i>	111-50-2	None	None	None	None	None

### U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>Adipyl Chloride</i>	111-50-2	Not Applicable	Not Applicable

### Canada

#### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Adipyl Chloride  
111-50-2 ( 100 )

WHMIS 2015 Hazard Classification  
Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.; Specific target organ toxicity - Single exposure - Category 3: H335 May cause respiratory irritation.; Physical Hazards Not Otherwise Classified - Category 1: Reacts vigorously with water at ambient temperature and produces a toxic gas

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**DSL/NDSL**

Component	CAS No	Canada (DSL)	Canada (NDSL)
Adipyl Chloride	111-50-2	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Adipyl Chloride	111-50-2	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Adipyl Chloride	111-50-2	Not listed

**EU Classification**

**EU GHS - SV - CLP 1272/2008**

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Adipyl Chloride	111-50-2	

**EU - CLP (1272/2008)**

**R-phrase(s)**

R34 - Causes burns  
R41 - Risk of serious damage to eyes

**S -phrase(s)**

S 7 - Keep container tightly closed.  
S36 - Wear suitable protective clothing

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Adipyl Chloride	111-50-2		No information	

**The product is classified in accordance with Annex VI to Directive 67/548/EEC**

**Indication of danger:**

C - Corrosive

C



## 16. OTHER INFORMATION

**Preparation Date:** 07/25/2019  
**Revision date** 07/25/2019  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**