

Material Safety Data Sheet**ADIPIC ACID DIHYDRAZIDE**

acc. to OSHA and ANSI

1. Identification of the chemical and manufacturer/importer/undertaking*1.1. Identification of the substance or preparation*

Trade Name : Adipic Acid Dihydrazide
EINECS : 213-999-5
CAS : 1071-93-8
Formula : C₆H₁₄N₄O₂
Mol. Weight : 174,2

1.2. Identification of the manufacturer/importer/undertaking

Manufacturer : Carboshale OÜ
Address : Akadeemia tee 23A
12618 Tallinn, ESTONIA
Phone : +372-670 3645
Fax : +372-656 0159

Emergency Contact : Estonia: Call 112
USA : CHEMTREC, call 800 424 9300

2. Composition and information on ingredients*2.1. Description*

CAS Number	Name of ingredient	Content of dry weight	EINECS Number	Warning symbol, R-phrases
1071-93-8	Adipic Acid Dihydrazide	100 %	213-999-5	Xi, R36/37/38

3. Hazards identification**EMERGENCY OVERVIEW**

Caution! The toxicological properties of this material have not been fully investigated.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic: No information available.

4. First aid measures

4.1. After inhalation

Supply fresh air. If required, provide artificial respiration. Seek immediate medical advice.

4.2. After skin contact

Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Seek immediate medical advice.

4.3. After eye contact

Rinse opened eye for several minutes under running water. Seek medical advice.

4.4. After swallowing

Seek immediate medical advice.

5. Fire fighting measures

5.1. Suitable extinguishing agents

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2. Special hazards caused by the material, its products of combustion or resulting gases

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NO_x)

5.3. Protective equipment

Wear self-contained respirator. Wear fully protective impervious suit.

6. Accidental release measures

6.1. Person-related safety precautions

Wear MSHA/NIOSH (approved or equivalent) protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

6.2. Measures for environmental protection

Do not allow material to be released to the environment without proper governmental permits.

6.3. Measures for cleaning/collecting

Ensure adequate ventilation.

6.4. Additional information

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7. Handling and storage

7.1. Handling

Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.

Information about protection against explosions and fires: No information available.

7.2. Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.

Shelf life:

In closed package for 2 years.

8. Exposure control / personal protection

8.1. Additional information about design of technical systems

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 1071-93-8: none listed

8.2. Personal protective equipment

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator with filter against fine dust and ammonia when packing, unpacking, loading or otherwise being in the same room with larger quantities of open product. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Protection of hands

Wear appropriate protective gloves to prevent skin exposure.

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Body protection

Wear appropriate protective clothing to prevent skin exposure.

8.3. Additional information

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Adipic Dihydrazide	none listed	none listed	none listed

9. Physical and chemical properties

Physical state, color and odor:

White odorless powder

Molecular Formula:

$C_6H_{14}N_4O_2$

Molecular Weight:

174.2

Information on changes in the physical state:

Melting point/Melting range

180-182 °C / 356-362 °F

Boiling point/Boiling range

Not available

Sublimation temperature / start

Not available

Flash point

>150 °C / 303 °F

Ignition temperature

360 °C / 680 °F

Decomposition temperature

Not available

Explosion limits:

a) Lower:

Not available

b) Upper:

Not available

Vapor pressure:

Not available

Bulk density:

700 (kg/m³) 4,6 lb/gal

Solubility in water:

50 g/l; 0,1875 lb/gal

pH value @10g/l, 20°C:

9,5

0,083lb/gal @ 68°F

10. Stability and reactivity

10.1. Thermal decomposition / conditions to be avoided

Decomposition will not occur if used and stored according to specifications.

10.2. Materials to be avoided

Oxidizing agents, strong bases.

10.3. Dangerous reactions

No dangerous reactions known

10.4. Dangerous products of decomposition

Carbon monoxide and carbon dioxide. Nitrogen oxides.

11. Toxicological information

11.1. Acute toxicity

LD50 (oral)mouse >5000 mg/kg

Primary irritant effect:

a) on the skin Irritant to skin and mucous membranes.

b) on the eye Irritating effect

Sensitization No sensitizing effects known

11.2. Subacute to chronic toxicity

Other than potential irritation (see above), no information on illness or injury from acute or chronic exposure to this product is available.

11.3. Additional toxicological information

RTECS#: CAS# 1071-93-8 unlisted.

Carcinogenicity: CAS# 1071-93-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: No data available.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12. Ecological information

12.1. General notes

Do not allow material to be released to the environment without proper governmental permits.

13. Disposal considerations

13.1. Product

Recommendation:

Consult state, local or national regulations for proper disposal.

13.2. Uncleaned packagings

Recommendation:

Disposal must be made according to official regulations.

13.3. Additional information

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

14. Transport information

Not regulated as a hazardous material material for transportation.

DOT regulations

No information available

Hazard class None

Land transport ADR/RID (cross-border)

ADR/RID class None

Maritime transport IMDG

IMDG Class None

Air transport ICAO-TI and IATA-DGR

ICAO/IATA Class None

15. Regulatory information

15.1. European/International Regulations

European Labeling in Accordance with EC Directives

Product related hazard information

Hazard symbols **Xi - Irritant**

Risk phrases

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases

- S 24/25 Avoid contact with skin and eyes.
S 37 Wear suitable gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 28A After contact with skin, wash immediately with plenty of water.

15.2. National regulations**US FEDERAL****TSCA**

CAS# 1071-93-8 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1071-93-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

Canada - DSL/NDSL

CAS# 1071-93-8 is listed on Canada's NDSL List.

Canada - WHMIS

WHMIS: Not available.

Canadian Ingredient Disclosure List

Exposure Limits for CAS#1071-93-8. none listed**15.3 Information about limitation of use**

For use only by technically qualified individuals.

16. Other information

The information contained on the MSDS has been compiled from data considered accurate. This data is believed to be reliable, however, it must be pointed out that values for certain properties are known to vary from source to source. Carboshale OÜ expressly disclaims any warranty expressed or implied as well as any liability for any injury or loss arising from the use of this information or the materials described. This data is not to be construed as absolutely complete since additional data may be desirable when particular conditions or circumstances exist. It is the responsibility of the user to determine the best precautions necessary for the safe handling and use of this material for his application. This data relates only to the specific material designated and not to be used in combination with any other material. Many local regulations pertain directly or indirectly to the product's end use and disposal of containers and unused material. It is the purchaser's responsibility to familiarize themselves with all applicable regulations.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.