

Sovchem® ADC

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333	Emergency Contact Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
Trade Name(s): Sovchem® ADC	Synonyms: 1,1'-Azobisformamide
Chemical Name: C, C'-azodi(formamide)	CAS Number: 123-77-3
Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.	Application of the substance/the preparation: Laboratory chemicals. Manufacture of substances.
Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	Date of Issue: November 1, 2018

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

May form combustible dust concentrations in air (USA GHS Only).



GHS08

Health Hazard

Resp.Sens.1

H334 May cause allergy or asthma symptoms or breathing difficulties if

Additional information

There are no other hazards not otherwise classified that have been identified.

0% of the mixture consists of component(s) of unknown toxicity.

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008

The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS08

Signal word Danger

Hazard-determining components of labeling: C, C'-azodi(formamide)

Hazard statements

May form combustible dust concentrations in air (USA GHS Only)

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements

- P284 Wear respiratory protection.
- P261 Avoid breathing dust.
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: EUH044 Risk of explosion if heated under confinement.

Hazard description

WHMIS-symbols



B4 Flammable solid
D2A Very toxic material causing other toxic effects.



Health = 2
Fire = 3
Reactivity =3

HEALTH	2
FIRE	1
REACTIVITY	0

Health = *2
Fire = 3
Reactivity =3

*- Indicates a long-term health hazard from repeated or prolonged exposures.

HMIS Long Term Health Hazard Substances: Substance is not listed.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Explosive Product Notice

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES – The prevention of accidents in the use of explosives is a result of careful planning and observance of the best-known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING – All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations or ordinances. If you have any question or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

CAS No., Description: 123-77-3, C, C'-azodi(formamide)

Identification number(s)

EC number: 204-650-8
Index number: 611-028-00-3
SVHC: 123-77-3, C, C'-azodi(formamide)

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information: Take affected persons out into the fresh air.

After inhalation

Remove victim to fresh air, administer oxygen and/or artificial respiration if unconscious. Contact a physician immediately.

In case of unconsciousness place patient stably in side position for transportation

After skin contact

Immediately remove any clothing soiled by the product.

Seek immediate medical advice.

Rinse with copious amounts of water. Wash with soap and water. Launder affected clothing before reuse.

After eye contact

Rinse opened eye for several minutes under running water.

Remove contact lenses if worn.

Seek immediate medical advice.

After swallowing

Do not induce vomiting.

Give plenty of water if victim is conscious and able to swallow. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Asthma attacks

Blast injury if mishandled

Breathing difficulty

Coughing

Allergic reactions

Hazards

Danger of blast or crush-type injuries.

Danger of impaired breathing.

4.3 Indication of any immediate medical attention and special treatment needed

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

Later observation for pneumonia and pulmonary edema.

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

Contains C, C'-azodi(formamide). May produce an allergic reaction.

If medical advice is needed, have product container or label at hand.

In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents

Use water spray, dry chemical, CO₂, or appropriate foam.
Water spray or fog may be used to cool containers.
For safety reasons, unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture
Danger of receptacles bursting because of high vapor pressure when heated.
Combustion gases are toxic.
Can form explosive gas/air mixtures.

5.3 Advice for firefighters
Protective equipment
Wear self-contained respiratory protective device.
Wear fully protective suit.
Additional information: Eliminate all ignition sources if safe to do so.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use respiratory protective device against the effects of fumes/dust/aerosol.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Protect from heat.
Isolate area and prevent access.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up
Dispose contaminated material as waste according to Section 13.
Send for recovery or disposal in suitable receptacles.

6.4 Reference to other sections
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 Precautions for safe handling
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122 °F.
Open and handle receptacle with care.
Prevent formation of dust.
Handle with care. Avoid jolting, friction and impact.
Use only in well ventilated areas
Do not subject to grinding/shock/friction.
Information about fire - and explosion protection
Prevent impact and friction.
Keep respiratory protective device available.
Emergency cooling must be available in case of nearby fire.

Dust can combine with air to form an explosive mixture.
Avoid dust cloud formation. Keep ignition sources away. No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles

Store in a cool location.

Provide ventilation for receptacles.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions: Store in cool, dry conditions in well-sealed receptacles.

7.3 Specific end use(s): No further relevant information available.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see Section 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs: No further relevant information available.

PNECs: No further relevant information available.

Additional information: No further relevant information available.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not inhale gases/fumes/aerosols.

Avoid contact with the eyes and skin.

Respiratory protection



Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

Protection of hands



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Eye protection

Contact lenses should not be worn.



Safety glasses

Face protection.

Body protection: Impervious protective clothing.

Limitation and supervision of exposure into the environment: No further relevant information available.
 Risk management measures: Organizational measures should be in place for all activities involving this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

Appearance: Form: Crystalline Powder. Color: Yellow	Change in Condition: Melt Point/Range: 225°C (437 °F). Boiling point/Range: Undetermined.
Odor: Odorless.	Odor threshold: Not determined.
pH: Not applicable	Flash point: Not applicable.
Vapor Pressure: Not determined.	Flammability (solid, gaseous): Not determined.
Density at 20 °C: 0.57 g/cm ³ (4757 lbs./gal)	Ignition temperature: Not determined.
Relative density Not determined.	Decomposition temperature: Not determined.
Vapor Density (Air = 1): Not applicable.	Self-igniting: Not determined.
Evaporation rate Not applicable.	Danger of explosion: Risk of explosion if heated under confinement.
Solubility in / Miscibility with water: Slightly soluble.	Oxidizing properties: Non-oxidizing.
Viscosity: Dynamic: Not applicable. Kinematic: Not applicable.	Explosion limits: Lower: Not determined. Upper: Not determined.

9.2 Other information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition / conditions to be avoided
 Risk of explosion if heated under confinement.
 No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions: Danger of explosion.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: Strong oxidizers such as perchlorates, bromates and nitrates.

10.6 Hazardous decomposition products: Nitrogen oxides (NO_x).

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification

Oral	LD50	5000 mg/kg (rat)
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Primary irritant effect

Skin corrosion/irritation: Slight irritant effect on skin and mucous membranes.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitization: Sensitization possible through inhalation.

Additional toxicological information: Toxic and/or corrosive effects may be delayed up to 24 hours.

Repeated dose toxicity: No further relevant information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT – Single exposure: Based on available data, the classification criteria are not met.

STOT – repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: Not easily biodegradable.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information

General notes

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste. The user of this material has the responsibility to dispose of unused material, residues and compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

Residual materials should be treated as hazardous.

Uncleaned packaging

Recommendation

Non-contaminated packaging may be recycled.

Empty contaminated packaging thoroughly. They may be recycled after thorough and proper cleaning. Packaging that may not be cleansed are to be disposed of in the same manner as the product. Disposal must be made according to official regulations. Recommended cleansing agents: Water, if necessary together with cleansing agents.

14. TRANSPORTATION INFORMATION

14.1 UN-Number
DOT, ADR, IMDG, IATA UN3242

14.2 UN proper shipping name
DOT Azodicarbonamide
ADR 3242 AZODICARBONAMIDE
IMDG, IATA AZODICARBONAMIDE

14.3 Transport hazard class(es)
DOT



Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives.
Label: 4.1

ADR



solid

Class: 4.1 (SR1) Flammable solids, self-reactive substances and desensitized explosives.
Label: 4.1

IMDG, IATA



Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives.
Label: 4.1

14.4 Packing group
DOT, ADR, IMDG, IATA II

14.5 Environmental hazards
Marine pollutant No
Special marking (IATA) FORBIDDEN BY AIR

14.6 Special precautions for user Warning: Flammable solids, self-reactive substances and solid desensitized explosives.

Danger code (Kemler) 40

EMS Number F-J, S-G

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport/Additional information Not applicable.

ADR

Limited quantities (LQ) 1 kg

Excepted quantities (EQ) Code: E0

Transport category 2

Tunnel restriction code D

IMDG

Limited quantities (LQ) 500 g

Excepted quantities (EQ) Code: E2

 Maximum net quantity per inner packaging: 30g

 Maximum net quantity per outer packaging: 500g

IATA FORBIDDEN

UN "Model Regulation" UN3242, AZODICARBONAMIDE, 4.1, II

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture United States (USA)

States (USA)	
SARA Section 355 (extremely hazardous substances)	Substance is not listed.
SARA Section 313 (Specific toxic chemical listings)	Substance is not listed.
TSCA (Toxic Substances Control Act)	Substance is listed.
Proposition 65 (California)	
Chemicals known to cause cancer	Substance is not listed.
Chemicals known to cause reproductive toxicity for females	Substance is not listed.
Chemicals known to cause reproductive toxicity for males	Substance is not listed.
Chemicals known to cause developmental toxicity	Substance is not listed.
Carcinogenic Categories	
EPA (Environmental Protection Agency)	Substance is not listed.
IARC (International Agency for Research on Cancer)	Substance is not listed.
TLV (Threshold Limit Value established by ACGIH)	Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed.
Canada	
Canadian Domestic Substances List (DSL)	Substance is listed.
Canadian Ingredient Disclosure list (limit 0.1%)	Substance is not listed.
Canadian Ingredient Disclosure list (limit 1%)	Substance is not listed.

National regulations

Information about limitation of use

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.
Other regulations, limitations and prohibitive regulations
Directive 2012/18/EU
Named dangerous substances – ANNEX I Substance is not listed.
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
Substances of very high concern (SVHC) according to REACH, Article 57
123-77-3, C, C'-azodi(formamide)

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Resp. Sens. 1: Sensitization – Respirat., Hazard Category 1