



SAFETY DATA SHEET

According to JIS Z 7253:2012

Revision Date 07-Jan-2015

Version 1

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	V-50
Product code	923-10652,923-10674,929-10654
CAS No	2997-92-4
Formula	C8H18N6.2HCl,(C8H20Cl2N6)
Manufacturer	Wako Chemicals USA, INC. 1600 Bellwood Rd., Richmond, VA 23237 Phone: 804-271-7677, Fax: 804-271-7791
Supplier	Wako Chemicals USA, INC. 1600 Bellwood Rd., Richmond, VA 23237 Phone: 804-271-7677, Fax: 804-271-7791
Emergency telephone number	CHEMTREC 1-800-424-9300 (contract # 24004)
Recommended uses and restrictions on use	No information available

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Self-Heating Substances and Mixtures

Acute toxicity - Oral

Skin corrosion/irritation

Skin sensitization

Category 2

Category 4

Category 3

Category 1

Pictograms



Signal word

Warning

Hazard statements

H252 - Self-heating in large quantities; may catch fire

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H316 - Causes mild skin irritation

Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Contaminated work clothing should not be allowed out of the workplace
- Keep cool. Protect from sunlight
- Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements-(Response)

- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse.
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth.

Precautionary statements-(Storage)

- Maintain air gap between stacks/pallets
- Store away from other materials

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Formula C₈H₁₈N₆.2HCl,(C₈H₂₀Cl₂N₆)

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS No
2,2'-Azobis(2-amidinopropane) Dihydrochloride	>=97.0	271.19	(2)-2885	N/A	2997-92-4

Impurities and/or Additives : Not applicable

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

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

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Water spray (fog), carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Special extinguishing method

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated. See Section 12 for additional ecological information.

Methods and materials for contaminant and methods and materials for cleaning up

Do not touch spilled material without suitable protection(See section 8). After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Container containing the recovered material is distinguished from the other garbage and store in a cool, dark place without sealed until processing. Use a secure tool that does not generate a spark.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Use with local exhaust ventilation.

Precautions

Avoid being incompatible with strong acids, especially strong oxidizing agent (nitric acid, etc.). When handling, to pay particular attention to static electricity ignition source, such as shock spark. Avoid long-term and repeated exposure. Pay attention not to give shock.

Safety handling precautions

Use personal protective equipment as required.

Storage

Safe storage conditions

Storage conditions

Store away from sunlight in a cool (lower than 40 °C = 104°F) well-ventilated dry place. Internal pressure of the container is increased by the nitrogen gas is released by thermal decomposition. Do not keep the container sealed.

Safe packaging material

Plastic bag, Carton box, Fiber drums

Incompatible substances

No information available

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal protective equipment

Respiratory protection

Protective mask

Hand protection

Protection gloves

Eye protection

protective eyeglasses or chemical safety goggles

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	
Color	nearly white
Appearance	powder or Granular
Odor	Odorless
pH	No data available
Melting point/freezing point	160-169(dec.) °C
Boiling point, initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits	
Upper :	No data available
Lower :	125mg/L(dust explosion)
Vapour pressure	7.20X10E-6Pa,9.77X10E-6Pa
Vapour density	No data available
Specific Gravity (relative density)	1.2133-1.2137g/cm3
Solubilities	water : free soluble . methanol , Ethanol , acetone , N,N-Dimethylformamide , dioxane : practically insoluble .
n-Octanol/water partition coefficient:(log Pow)	<0.3
Auto-ignition temperature:	No data available
Decomposition temperature:	110(SADT) °C
Viscosity (coefficient of viscosity)	No data available
Dynamic viscosity	No data available

Section 10: STABILITY AND REACTIVITY

Stability

Stability	Stable under recommended storage conditions.
Reactivity	No data available

Hazardous reactions

Decompose at an accelerating pace and discharge nitrogen gas. May cause runaway reaction by heat or sunlight because of self-reactivity. Decompose gradually if stored it higher than 40°C.

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

No information available

Hazardous decomposition products

No information available

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,2'-Azobis(2-amidinopropane) Dihydrochloride	rat 410mg/kg	> 5900 mg/kg (Rat)	N/A

Skin irritation/corrosion

Component	Skin corrosion irritation source information
2,2'-Azobis(2-amidinopropane) Dihydrochloride 2997-92-4 (>=97.0) 2997-92-4 (>=97.0)	Skin; rabbit; 500mg; Mild(EPASRS: 8EHQ-0282-0427S)

Serious eye damage/ irritation No data available

Respiratory or skin sensitization

Component	Respiratory, Skin sensitization source information

2,2'-Azobis(2-amidinopropane) Dihydrochloride 2997-92-4 (>=97.0) 2997-92-4 (>=97.0)	Positive (Guinea pig)
Reproductive cell mutagenicity	
Component	Mutagenic source information
2,2'-Azobis(2-amidinopropane) Dihydrochloride 2997-92-4 (>=97.0) 2997-92-4 (>=97.0)	Reverse mutation assay in S.typhimurium and E.coli (Salmonella) Negative
Carcinogenicity	No data available
Reproductive toxicity	
Component	Reproductive toxicity source information
2,2'-Azobis(2-amidinopropane) Dihydrochloride 2997-92-4 (>=97.0) 2997-92-4 (>=97.0)	NOAEL 60mg/kg
STOT-single exposure	No data available
STOT-repeated exposure	
Component	STOT -repeated exposure- source information
2,2'-Azobis(2-amidinopropane) Dihydrochloride 2997-92-4 (>=97.0) 2997-92-4 (>=97.0)	28-D NOAEL 25mg/kg
Aspiration hazard	No data available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
2,2'-Azobis(2-amidinopropane) Dihydrochloride	N/A	<i>EC10(Bacteria):>10000mg/L/96 hr</i> <i>EC50(Bacteria):>10000mg/L/96 hr</i> LC50(golden orfe): 570mg/L/96hr <i>95% Confidence limits(golden orfe):470-680mg/L</i> NOEC(golden orfe):320mg/L	N/A

Other data No data available

Persistence and degradability No information available
Bioaccumulative potential No information available
Mobility in soil No information available
Hazard to the ozone layer No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID

UN number UN3088
Proper shipping name: Self-heating solid, organic, n.o.s. (2,2'-Azobis(2-amidinopropane) Dihydrochloride)
UN classification 4.2
Subsidiary hazard class
Packing group II
ERG Code 4L
Marine pollutant YES

IMDG

UN number	UN3088
Proper shipping name:	Self-heating solid, organic, n.o.s. (2,2'-Azobis(2-amidinopropane) Dihydrochloride)
UN classification	4.2
Subsidiary hazard class	
Packing group	II
EmS-No	F-A, S-J
Marine pollutant (Sea)	YES

IATA

UN number	UN3088
Proper shipping name:	Self-heating solid, organic, n.o.s. (2,2'-Azobis(2-amidinopropane) Dihydrochloride)
UN classification	4.2
Subsidiary hazard class	
Packing group	II
Environmentally Hazardous Substance	Marine Pollutant

Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS	Listed
TSCA	Listed

Japanese regulations

Fire Service Act	Not applicable
Poisonous and Deleterious Substances Control Law	Not applicable
Industrial Safety and Health Act	Not applicable
Regulations for the carriage and storage of dangerous goods in ship	Flammable Solids - Spontaneously Combustible Solids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Flammable Solids - Spontaneously Combustible Solids (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc , Attached Table 1)
Pollutant Release and Transfer Register Law	Not applicable
Air Pollution Control Law	Not applicable

Section 16: OTHER INFORMATION

Literature and references**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z7252(2010). *JIS: Japanese Industrial Standards

End of Safety Data Sheet