

SAFETY DATA SHEET

According to OSHA HazCom 2012
Revision Date 12-Jun-2020
 Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name V-59(Powder)

Other means of identification

Product Code 921-13534,923-13538,929-13535

UN/ID No UN3236

Recommended use of the chemical and restrictions on use

Recommended Use No information available.

Uses advised against No information available

Details of the supplier of the safety data sheet**Distributor**

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2. HAZARDS IDENTIFICATION

GHS classification**Classification of the substance or mixture****Self-reactive substances and mixtures**

Type D

Acute toxicity - Oral

Category 3

Specific target organ toxicity (repeated exposure)

Category 2

Category 2 liver, kidneys

Pictograms

Signal word

Danger

Hazard statements

H242 - Heating may cause a fire

H301 - Toxic if swallowed

H373 - May cause damage to the following organs through prolonged or repeated exposure: liver, kidneys

Precautionary statements-(Prevention)

Keep away from heat/sparks/open flames/hot surfaces. — No smoking Keep/Store away from clothing/combustible materials Keep only in original container Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Do not

breathe dust/fume/gas/mist/vapors/spray

Precautionary statements-(Response)

Get medical advice/attention if you feel unwell

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Rinse mouth.

In case of fire: Use Water spray, fog or regular foam for extinction

Precautionary**statements-(Storage)**

Store in a well-ventilated place. Keep cool Store away from other materials Store locked up.

Precautionary statements-(Disposal)

Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Formula C10H16N4

Chemical Name	Molecular weight	CAS RN	Weight-%
2,2'-Azobis(2-methylbutyronitrile)	192.26	13472-08-7	>=98.0

Impurities and/or Additives : Not applicable

4. FIRST AID MEASURES

First aid measures

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

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

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

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.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing media

Water. Foam.

Unsuitable Extinguishing media Powder. Carbondioxide.

Specific hazards arising from the chemical

No information available.

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

Explosion data

Sensitivity to Mechanical Impact none.
Sensitivity to Static Discharge none.

Protective equipment and precautions 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, protective equipment and emergency procedures Use personal protective equipment as required. Remove all sources of ignition.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. To be careful not discharged to the environment without being properly handled waste water contaminated. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods and material for containment and cleaning up Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material.

Prevention of secondary hazards 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.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures Avoid contact with strong oxidizing agents.
Protective measures Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage conditions Store away from sunlight in the refrigerator(lower than 10 °C = 50°F). Internal pressure of the container is increased by the nitrogen gas released by thermal decomposition. Do not keep the container sealed. Store locked up.

Packaging materials Paper box. Carton box. Plastic bag.

Incompatible materials Strong oxidizing agents.

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	Dust mask
Hand protection	Protective gloves
Eye protection	protective eyeglasses or chemical safety goggles
Skin and body protection	Long-sleeved work clothes, protective boots
General hygiene considerations	
Handle in accordance with good industrial hygiene and safety practice.	

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	
Color	white
Appearance	powder
Odor	Odorless
pH	No data available
Melting point/freezing point	48-52 °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 :	No data available
Vapour pressure	4.0X10 ⁻¹ Pa
Vapour density	No data available
Specific Gravity / Relative density	Approx.1.1
Solubilities	water : very slightly soluble. dimethyl sulfoxide : free soluble . toluene , methanol : Very soluble.
n-Octanol/water partition coefficient:(log Pow)	2.1
Auto-ignition temperature:	450 °C
Decomposition temperature:	45(SADT) °C
Viscosity (coefficient of viscosity)	No data available
Dynamic viscosity	No data available

10. STABILITY AND REACTIVITY

Stability

Chemical 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 at higher than 10°C.

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x), nitrogen gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,2'-Azobis(2-methylbutyronitrile)	rat male 271mg/kg female 251mg/kg	N/A	> 8.9 mg/L (Rat) 4 h

Skin irritation/corrosion

No data available

Serious eye damage/ irritation No data available
 Respiratory or skin sensitization No data available
 Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
2,2'-Azobis(2-methylbutyronitrile)	Reverse mutation assay in S.typhimurium and E.coli Negative Chromosomal aberration test in cultured mammalian cells Negative

Carcinogenicity No data available

Reproductive toxicity No data available
 STOT-single exposure No data available
 STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
2,2'-Azobis(2-methylbutyronitrile)	NOEL=2mg/kg/day (28 days, rat, oral) Light effects on liver and kidney was admitted by the dosage of 20mg/kg.

Aspiration hazard No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

No information available

Persistence and degradability

This material is persistent.

Bioaccumulative potential

No information available

Mobility in soil

No information available

Other Data

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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

Precautionary including method of disposing contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

UN/ID No UN3236
 Proper shipping name: Self-reactive solid type D, temperature controlled (2,2'-Azodi(2-methylbutyronitrile))
 UN classification 4.1
 Subsidiary hazard class
 Packing group
 Marine pollutant Not applicable

IATA

UN/ID No UN3236
 Proper shipping name: Self-reactive solid type D, temperature controlled (2,2'-Azodi(2-methylbutyronitrile))
 UN classification 4.1
 Subsidiary hazard class
 Packing group
 Environmentally Hazardous Substance Not applicable

IMDG

UN/ID No	UN3236
Proper shipping name:	Self-reactive solid type D, temperature controlled (2,2'-Azodi(2-methylbutyronitrile))
UN classification	4.1
Subsidiary hazard class	
Packing group	
Marine pollutant (Sea)	Not applicable

15. REGULATORY INFORMATION

International Inventories

TSCA	Listed
DSL	Listed
NDSL	-
EINECS/ELINCS	Listed
ENCS	Listed
IECSC	Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**California Proposition 65**

This product does not contain any chemicals regulated by Proposition 65

U.S. State Right-to-Know Regulations**U.S. EPA Label Information**

EPA Pesticide Registration Number	Not applicable
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16. OTHER INFORMATION

Revision Date 12-Jun-2020

Revision Note

No information available

Disclaimer

The information provided in this Material 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, use, processing, storage, transportation, disposal and release 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.

End of Safety Data Sheet

Suitable extinguishing media

Water, Foam

Unsuitable extinguishing media

Powder, Carbondioxide

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.

Special protective actions for

fire-fighters

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