

# SAFETY DATA SHEET

# spectrum®



Revision date 02-February-2021

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** 2,4-DINITROPHENYLHYDRAZINE

### Other means of identification

**Product Code(s)** DI149

**UN/ID no** UN1325

**Synonyms** None

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

**Recommended use** No information available

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

#### Supplier Address

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

### Emergency telephone number

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. Hazard(s) identification

### Classification

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2B
Flammable solids	Category 1

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

**Danger**

#### Hazard statements

Harmful if swallowed  
Causes eye irritation  
Flammable solid



**Appearance** Crystalline powder

**Physical state** Solid

**Odor** No information available

#### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ ventilating / lighting/ .? / equipment  
Wear protective gloves/eye protection/face protection

#### Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention  
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
Rinse mouth  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

#### Other information

May explode if allowed to dry.

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No	Weight-%	Trade secret
2,4-Dinitrophenylhydrazine	119-26-6	65 - 70	*
Water	7732-18-5	30 - 35	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid measures

#### Description of first aid measures

##### General advice

Show this safety data sheet to the doctor in attendance.

##### Inhalation

Remove to fresh air.

##### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

**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**

<b>Suitable Extinguishing Media</b> Large Fire	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). water spray. Alcohol resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>Hazardous combustion products</b>	Carbon Monoxide, Carbon Dioxide. Nitrogen oxides (NO <sub>x</sub> ).
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	none.
<b>Sensitivity to static discharge</b>	yes.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
<b>Other information</b>	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Keep out of drains, sewers, ditches and waterways.
<b>Methods for cleaning up</b>	Take precautionary measures against static discharges. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

**Advice on safe handling** Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Control parameters

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

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

**Eye/face protection** Tight sealing safety goggles.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Physical state** Solid

<b>Appearance</b>	Crystalline powder
<b>Color</b>	dark orange; red
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	no data available	None known
<b>Melting point / freezing point</b>	197 - 200 °C / 386.6 - 392 °F	None known
<b>Boiling point / boiling range</b>	no data available	None known
<b>Flash point</b>	no data available	None known
<b>Evaporation rate</b>	no data available	None known
<b>Flammability (solid, gas)</b>	no data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	no data available	None known
<b>Relative density</b>	no data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	no data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	no data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	no data available	None known
<b>Dynamic viscosity</b>	No data available	None known

#### Other information

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	198.14
<b>VOC Content (%)</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. Stability and reactivity

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible materials</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### **Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes eye irritation. May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.

**Ingestion**

Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** May cause redness and tearing of the eyes.

**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 934.30 mg/kg

**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2,4-Dinitrophenylhydrazine 119-26-6	= 654 mg/kg ( Rat )	-	-
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-

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

**Skin corrosion/irritation** May cause skin irritation.  
**Serious eye damage/eye irritation** Classification based on data available for ingredients. Irritating to eyes.  
**Respiratory or skin sensitization** No information available.  
**Germ cell mutagenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Persistence and degradability** No information available.  
**Bioaccumulation** Inherently biodegradable.

**Other adverse effects** No information available.

**13. Disposal considerations****Waste treatment methods**

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

## 14. Transport information

### DOT

**UN/ID no** UN1325  
**Proper Shipping Name:** Flammable solids, organic, n.o.s.  
**Hazard class** 4.1  
**Packing group:** II  
**Special Provisions** A1, IB8, IP2, IP4, T3, TP33  
**Marine Pollutant** Severe Marine Pollutant  
**Description:** UN1325, Flammable solids, organic, n.o.s., 4.1, II  
**Emergency Response Guide Number** 133

### TDG

**UN-No:** UN1325  
**Proper Shipping Name:** Flammable solid, organic, n.o.s.  
**Hazard class** 4.1  
**Packing Group:** II  
**Description:** UN1325, Flammable solid, organic, n.o.s., 4.1, II

### MEX

**UN-No** UN1325  
**Proper Shipping Name** Flammable solid, organic, n.o.s.  
**Hazard class** 4.1  
**Special Provisions** 274  
**Packing Group** II  
**Description** UN1325, Flammable solid, organic, n.o.s., 4.1, II

### ICAO (air)

**UN-No:** UN1325  
**Proper Shipping Name:** Flammable solid, organic, n.o.s.  
**Hazard class** 4.1  
**Packing Group:** II  
**Special Provisions** A3  
**Description:** UN1325, Flammable solid, organic, n.o.s., 4.1, II

### IATA

**UN number** UN1325  
**Proper Shipping Name:** Flammable solid, organic, n.o.s.  
**Transport hazard class(es)** 4.1  
**Packing group** II  
**Description:** UN1325, Flammable solid, organic, n.o.s., 4.1, II

### IMDG

**UN number** UN1325  
**Proper shipping name** Flammable solid, organic, n.o.s.  
**Transport hazard class(es)** 4.1  
**Packing group** II  
**EmS-No** F-A, S-G  
**Special Provisions** 274  
**Marine pollutant** NP1  
**Description** UN1325, Flammable solid, organic, n.o.s., 4.1, II

### RID

**UN number** UN1325  
**Proper Shipping Name:** Flammable solid, organic, n.o.s.  
**Transport hazard class(es)** 4.1  
**Packing group** II  
**Classification code** F1  
**Special Provisions** 274  
**Description:** UN1325, Flammable solid, organic, n.o.s., 4.1, II  
**Labels** 4.1

## ADR

UN number	1325
Proper Shipping Name:	Flammable solid, organic, n.o.s.
Transport hazard class(es)	4.1
Packing group	II
Classification code	F1
Tunnel restriction code	(E)
Special Provisions	274
Description:	1325, Flammable solid, organic, n.o.s., 4.1, II, (E)
Labels	4.1

## ADN

UN/ID No	UN1325
Proper shipping name	Flammable solid, organic, n.o.s.
Transport hazard class(es)	4.1
Packing Group	II
Classification code	F1
Special Provisions	274
Description	UN1325, Flammable solid, organic, n.o.s., 4.1, II
Hazard label(s)	4.1
Limited quantity (LQ)	1 kg
Equipment Requirements	PP

## **15. Regulatory information**

### International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	This product complies with ENCS:
IECSC	This product complies with China:
KECL	Complies
PICCS	Complies
AICS	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

#### **Legend:**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

### 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**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### **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 Proposition 65 chemicals.

### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

## **U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

### **NFPA**

**Health hazards** 1

**Flammability** 0

**Instability** 0

**Physical and chemical properties** -

### **HMIS**

**Health hazards** 1

**Flammability** 0

**Physical hazards** 0

**Personal protection** X

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

#### **Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value		

### **Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

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Revision Note No information available.

**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, 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**