

## SAFETY DATA SHEET

Preparation Date: 08/20/2018

Revision Date: 08/20/2018

Revision Number: G1

### 1. IDENTIFICATION

**Product identifier**

**Product code:** VA110  
**Product Name:** VALERIC ACID, REAGENT

**Other means of identification**

**Synonyms:** Butanecarboxylic acid  
 1-Butanecarboxylic acid  
 Pentanoic acid  
 n-Pentanoic acid  
 Propylacetic acid  
 Valerianic acid  
 n-Valeric acid

**CAS #:** 109-52-4  
**RTECS #** YV6100000  
**CI#:** Not available

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

**Recommended use:** No information available.  
**Uses advised against** No information available

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

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 4

**Label elements**

Danger

**Hazard statements**

Harmful if swallowed  
Causes severe skin burns and eye damage  
Combustible liquid

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

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  
Wear protective gloves/protective clothing/eye protection/face protection  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/physician*  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor/physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
Immediately call a POISON CENTER or doctor/physician  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
Valeric Acid	109-52-4	100

**4. FIRST AID MEASURES**

Product code: VA110

Product name: VALERIC ACID,  
REAGENT

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### First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
- Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

### Most important symptoms and effects, both acute and delayed

- Symptoms**
- Severe skin and eye irritation or burns
  - Headache
  - Vomiting
  - Nausea
  - May cause irritation of respiratory tract
  - Coughing and wheezing
  - May cause shortness of breath

### Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

## **5. FIRE-FIGHTING MEASURES**

### Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray, mist, or foam.

**Unsuitable Extinguishing Media:** High volume water jet. Do not use a solid (straight) water stream as it may scatter and spread fire.

### Specific hazards arising from the chemical

**Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide.

**Specific hazards:** Combustible material. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They

will spread along the ground and collect in low or confined areas (sewers, basements, tanks). When heated to decomposition it emits acrid smoke and irritating fumes.

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

#### **Special Protective Equipment 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:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Remove all sources of ignition.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

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

#### **Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container.

#### **Methods for cleaning up**

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use clean non-sparking tools to collect absorbed material. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

### **Conditions for safe storage, including any incompatibilities**

#### **Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

#### **Incompatible Materials:**

Strong oxidizing agents

Reducing agents  
Bases

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Valeric Acid	109-52-4	None	None	None	None

##### Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Valeric Acid	109-52-4	None	None	None	None

##### Australia and Mexico

Components	CAS-No.	Australia	Mexico
Valeric Acid	109-52-4	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

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

#### Personal Protective Equipment

**Eye protection:** Face-shield.

**Skin and body protection:** Long sleeved clothing  
Chemical resistant apron  
Gloves

**Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical state:

Liquid

#### Appearance:

No information available.

#### Color:

Colorless.

#### Odor:

Unpleasant.

#### Taste

No information available.

#### Formula:

C5H10O2

#### Molecular/Formula weight (g/mole):

102.13

#### Flammability:

Combustible

#### Flashpoint (°C/°F):

89.4°C/192.9°F  
°C/204.8°F

<b>Flash Point Tested according to:</b> Closed cup Open cup	<b>Autoignition Temperature (°C/°F):</b> 400°C/752°F	<b>Lower Explosion Limit (%):</b> 2.7%
<b>Upper Explosion Limit (%):</b> 7.3%	<b>Melting point/range(°C/°F):</b> -34.5°C/-30.1°F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 186.5°C/367.7°F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 0.942 (Water = 1)	<b>pH:</b> 3 (Acidic)	<b>Vapor pressure @ 20°C (kPa):</b> 0.0199
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 3.5 (Air = 1)	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> 1.39	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Partially soluble in cold water	

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials.

**Incompatible Materials:**  
Strong oxidizing agents  
Reducing agents  
Bases

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Skin. Eyes. Ingestion. Inhalation.

### Acute Toxicity

### **Component Information**

**Product code:** VA110

**Product name:** VALERIC ACID,  
REAGENT

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Valeric Acid	
CAS-No.	109-52-4

**LD50/oral/rat** = 1055 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 600 mg/kg Oral LD50 Mouse  
**LD50/dermal/rabbit** = 660 mg/kg Dermal LD50; 290 mg/kg  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = 4100 mg/m<sup>3</sup> (2 hr.)  
**Other LD50 or LC50 information** = No information available

**Product Information**

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = 1055 mg/kg

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = 600 mg/kg

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = 660 mg/kg

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = 4100 mg/m<sup>3</sup> 2 hr.

**Symptoms**

**Skin Contact:** Severe skin irritation. Causes skin burns.  
**Eye Contact:** Severe eye irritation. Causes eye burns.  
**Inhalation** May cause irritation of respiratory tract. May cause nausea and headache. Symptoms may include coughing and wheezing. Symptoms may include coughing and shortness of breath.  
**Ingestion** Harmful if swallowed. Ingestion may cause nausea, vomiting. May cause headache.  
**Aspiration hazard** No information available.

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

**Chronic Toxicity** Prolonged or repeated inhalation may cause bronchitis with coughing, phlegm, and/or shortness of breath.  
**Sensitization:** No information available.  
**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Valeric Acid	109-52-4	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organs:** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Valeric Acid - 109-52-4*

**Freshwater Fish Species Data:** 77 mg/L LC50 Pimephales promelas 96 h static 1

**Water Flea Data:** 45 mg/L LC50 Daphnia magna 48 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal.

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Valeric Acid	109-52-4	None	None	None	None



## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Subsidiary Class:** No information available  
**Packing group:** III  
**Emergency Response Guide Number:** 153  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** IB3, T7, TP1, TP28  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III

### TDG (Canada)

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No Information available  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III

### ADR

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Special Provisions:** 274  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III

### IMO / IMDG

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No information available  
**EMS:** F-A  
**Special Provisions:** 223, 274  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III

### RID

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Special Provisions:** 274  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III

### ICAO

**UN-No:** UN3265

**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III  
**Special Provisions** A3

**IATA**

**UN-No:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (valeric acid)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**ERG Code:** 8L  
**Special Provisions** No information available  
**Description:** UN3265, Corrosive liquid, acidic, organic, n.o.s. (Valeric Acid), 8, III

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Valeric Acid	109-52-4	Present ACTIV E	Present KE-35263	Present	Present (2)-608	Present	Present	Present 203-677-2

**U.S. Regulations**

Valeric Acid

Massachusetts RTK: Present  
 New Jersey RTK Hazardous Substance List: 1988  
 Pennsylvania RTK: Present

FDA - Direct Food Additives 21 CFR 172.515  
 FDA - 21 CFR - Total Food Additives 172.515, 173.315

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Valeric Acid	109-52-4	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Valeric Acid	109-52-4	None	None	None	None	None

**U.S. TSCA**

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules	TSCA 8(d) -Health and Safety Reporting

		<b>(SNURS)</b>	
Valeric Acid	109-52-4	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Valeric Acid  
109-52-4 ( 100 )

WHMIS 2015 Hazard Classification  
Flammable liquids - Category 4: H227 Combustible liquid.; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

<b>Components</b>	<b>WHMIS Ingredient Disclosure List -</b>
Valeric Acid	1 %

### Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Valeric Acid	109-52-4	Present	Not Listed

<b>Components</b>	<b>CAS-No.</b>	<b>CEPA Schedule I - Toxic Substances</b>
Valeric Acid	109-52-4	Not listed
<b>Components</b>	<b>CAS-No.</b>	<b>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</b>
Valeric Acid	109-52-4	Not listed

### EU Classification

#### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Valeric Acid	109-52-4	Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage.; Hazardous to aquatic environment - chronic hazard - Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.607-143-00-3

#### EU - CLP (1272/2008)

#### **R-phrase(s)**

R34 - Causes burns.

R52 - Harmful to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

#### **S -phrase(s)**

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 - Wear suitable protective clothing.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S 1/2 - Keep locked up and out of the reach of children.

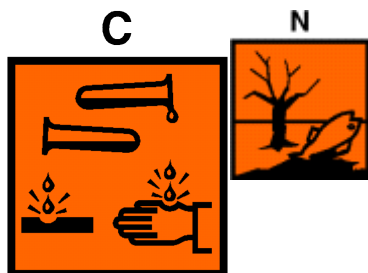
Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Valeric Acid	109-52-4	C; R34 R52-53	No information	S:(1/2)-26-36-45-61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

C - Corrosive.

N - Dangerous for the environment.



## 16. OTHER INFORMATION

Preparation Date: 08/20/2018  
Revision Date: 08/20/2018  
Prepared by: Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**