



Material Safety Data Sheet

NFPA 	HMS <table border="1" style="margin: auto;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; border: 1px solid black;">2</td> </tr> <tr> <td style="background-color: #FFC0CB;">Fire Hazard</td> <td style="text-align: center; border: 1px solid black;">3</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; border: 1px solid black;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	3	Reactivity	0	Personal Protective Equipment  See Section 15.
Health Hazard	2							
Fire Hazard	3							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
Common Name/Trade Name	Valeraldehyde	
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
Commercial Name(s)	Not available.	
Synonym	Amyl aldehyde; Butyl formal; n-Pentanal; n-Valeric aldehyde; Pentanal; Valeral; Valerianic aldehyde; Valeric aldehyde; Valerylaldehyde	
Chemical Name	Valeraldehyde	
Chemical Family	Not available.	
Chemical Formula	C5-H10-O	
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	Catalog Number(s)	VA105
	CAS#	110-62-3
	RTECS	YV3600000
	TSCA	TSCA 8(b) inventory: Valeraldehyde
	CI#	Not available.
	<u>IN CASE OF EMERGENCY</u> <u>CHEMTREC (24hr) 800-424-9300</u> CALL (310) 516-8000	

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	
1) Valeraldehyde	110-62-3				100
Toxicological Data on Ingredients	Valeraldehyde: ORAL (LD50): Acute: 6400 mg/kg [Mouse]. 3200 mg/kg [Rat]. DERMAL (LD50): Acute: 20000 mg/kg [Guinea pig]. 6000 mg/kg [Rabbit].				

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator), of ingestion.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Flammable.
Auto-Ignition Temperature	222°C (431.6°F)
Flash Points	CLOSED CUP: 12°C (53.6°F).
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	Highly flammable in presence of open flames and sparks, of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.
Fire Fighting Media and Instructions	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.
Special Remarks on Fire Hazards	When heated to decomposition it emits acrid smoke and irritating fumes. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Large Spill	Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas, dike if needed.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, alkalis
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 8°C (46.4°F). Refrigerate.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.
Personal Protection	Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 50 (ppm) from ACGIH (TLV) [United States] TWA: 50 (ppm) from OSHA (PEL) [United States] TWA: 50 (ppm) from NIOSH [United States] TWA: 175 (mg/m ³) from OSHA (PEL) [United States] TWA: 50 (ppm) [Canada] TWA: 175 (mg/m ³) [Canada] TWA: 50 (ppm) [Belgium] TWA: 50 (ppm) [France] TWA: 50 (ppm) [Norway] TWA: 50 (ppm) [Denmark] TWA: 50 (ppm) [Netherlands] Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Pungent. Acrid (Strong.)
Molecular Weight	86.13 g/mole	Taste	Fruity. Nutty. Chocolate (Slight.)
pH (1% soln/water)	Not available.	Color	Colorless
Boiling Point	103°C (217.4°F)		
Melting Point	-91.5°C (-132.7°F)		
Critical Temperature	Not available.		
Specific Gravity	0.8095 (Water = 1)		
Vapor Pressure	3.5 kPa (@ 20°C)		
Vapor Density	3 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, diethyl ether.		

Solubility	Soluble in diethyl ether. Slightly soluble in cold water. Soluble in Ethanol, Propylene Glycol, oils. Solubility in Water: 1.17 to 1.35% (11.7 to 13.5 g/L) at 20 deg. C.
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Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Heat, ignition sources (flames, sparks, static), incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents, reducing agents, alkalis
Corrosivity	Not available.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 3200 mg/kg [Rat]. Acute dermal toxicity (LD50): 6000 mg/kg [Rabbit].
Chronic Effects on Humans	MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. May cause damage to the following organs: kidneys, liver.
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of skin contact (permeator), of ingestion.
Special Remarks on Toxicity to Animals	Lethal Dose/Conc 50% Kill: LD50[Rat] - Route: Oral; Dose: 5.660 ml/kg LD50[Rabbit] - Route: Skin; Dose: 5 ml/kg
Special Remarks on Chronic Effects on Humans	May affect genetic material (mutagenic)
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes moderate to severe skin irritation. It can be absorbed through the skin. It may cause dermatitis. Eyes: Causes moderate to severe eye irritation. Inhalation: Inhalation of high concentrations of mist or vapor causes respiratory tract irritation. It may affect behavior/central nervous system (CNS depression, dizziness, lightheadness, suffocation). Ingestion: It may cause vomiting, nausea, diarrhea. It may affect the cardiovascular system (hypertension or hypotension, bradycardia or tachycardia, dysrhythmias), liver, kidneys.

Section 12. Ecological Information

Ecotoxicity	Ecotoxicity in water (LC50): 12.4 mg/l 96 hours [Fish (Pimephales promelas (Fathead minnow))].
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Continued on Next Page

Section 13. Disposal Considerations**Waste Disposal**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information**DOT Classification**

CLASS 3: Flammable liquid.

Identification

UNNA: 2058 : Valeraldehyde PG: II

Special Provisions for Transport

Not available.

DOT (Pictograms)**Section 15. Other Regulatory Information and Pictograms****Federal and State Regulations**

Illinois toxic substances disclosure to employee act: Valeraldehyde
 New York acutely hazardous substances: Valeraldehyde
 Rhode Island RTK hazardous substances: Valeraldehyde
 Pennsylvania RTK: Valeraldehyde
 Minnesota: Valeraldehyde
 Massachusetts RTK: Valeraldehyde
 Massachusetts spill list: Valeraldehyde
 New Jersey: Valeraldehyde
 California Director's List of Hazardous Substances: Valeraldehyde
 TSCA 8(b) inventory: Valeraldehyde
 TSCA 8(a) PAIR: Valeraldehyde
 TSCA 8(d) H and S data reporting: Valeraldehyde: Effective Date: 9/30/91; Sunset Date: 6/30/98

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 203-784-4).
 Canada: Listed on Canadian Domestic Substance List (DSL).
 China: Listed on National Inventory.
 Japan: Listed on National Inventory (ENCS).
 Korea: Listed on National Inventory (KECI).
 Philippines: Listed on National Inventory (PICCS).
 Australia: Listed on AICS.

Other Classifications**WHMIS (Canada)**

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

DSCL (EEC)


R11- Highly flammable.
 R36/37/38- Irritating to eyes, respiratory system and skin.

S9- Keep container in a well-ventilated place.
 S16- Keep away from sources of ignition - No smoking.
 S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S29/56- Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
 S33- Take precautionary measures against static discharges.
 S36/37- Wear suitable protective clothing and gloves.

HMS (U.S.A.)

Health Hazard	2
Fire Hazard	3
Reactivity	0
Personal Protection	h

National Fire Protection Association (U.S.A.)

Health  Flammability
 Reactivity
 Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves



Lab coat.



Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

MSDS Code V3000

References Not available.

Other Special Considerations Major Uses: in flavoring compounds, resin chemistry, and rubber accelerators; flavor ingredient for foods and beverages; monomer for acetal resins

Validated by Sonia Owen on 6/23/2009.

Verified by Sonia Owen.
 Printed 6/23/2009.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.