

A Division of Spectrum Chemical Mfg. Corp.

Dear Customer,

This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI¹ format to the GHS² format (see note below). In order to ensure that you receive complete labeling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

Why It Matters:

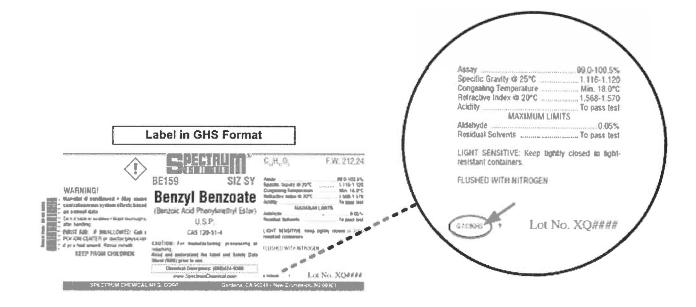
The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling [Label + (M)SDS] are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

<u>Picking the Right One</u>: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

- 1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond. ANSI labels: pictograms, if present, will be inside individual black boxes.
- 2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter. For GHS labels, the string of characters will end in "GHS:"



CORPORATE OFFICES 14422 South San Pedro Street Gardena, California 90248 PHONE 310.516.8000 FAX 310.516.9843



¹American National Standards Institute

² Globally Harmonized System for Hazard Communication

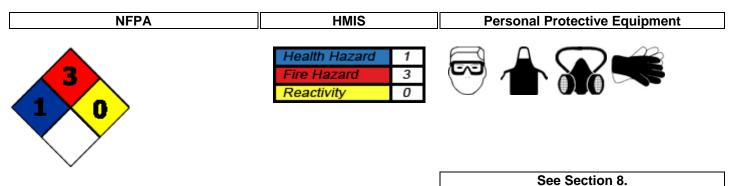
Sincerely,

Regulatory Affairs





MATERIAL SAFETY DATA SHEET



1. CHEMICAL PRODUCT A	ND COMPANY IDENTIFICATION
Product code:	A1280
Product Name:	AMYL ACETATE, REAGENT
Chemical Name:	Acetic acid, pentyl ester
Acetate d'amyle (French)	
Acetic acid, amyl ester	
Birnenoel	
Pent-acetate	
1-Pentanol acetate	
Pentyl acetate	
n-Pentyl acetate	
1-Pentyl acetate	
Primary amyl acetate	
Amyl acetic ester	
Recommended use:	Solvent. Paints. In photographic films and plates.
CAS #:	628-63-7
RTECS #	AJ1925000
Formula:	C7-H14-O2
CI#:	Not available
Supplier:	Spectrum Chemicals and Laboratory Products, Inc.
	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:	Regina Wachenheim (East Coast)
Contact Person:	Martin LaBenz (West Coast)

2. HAZARDS IDENTIFICATION

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW WARNING! Flammable liquid Irritating to eyes May cause skin irritation

Odor:	Physical state:	Appearance:	Color:
Banana-like.	Liquid.	No information available	Colorless.

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:

Skin. Eyes. Inhalation. Ingestion.

Acute Potential Health Effects:

Skin Contact:

May cause skin irritation. Mildly to moderately irritating to the skin. It may cause dermatitis. It may be absorbed through the skin.

Eye Contact:

Causes eye irritation. Mild eye irritation. May cause conjunctival irritation. May cause conjunctivitis.

Inhalation:

May cause irritation of respiratory tract. May cause central nervous system effects. May affect respiration. May cause cardiovascular effects. May cause pulmonary edema. May affect the urinary system. May affect the liver.

Ingestion:

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhoea. May cause abdominal discomfort.

Chronic Potential Health Effects:

Component	Carcinogen Status:
Amyl Acetate 628-63-7 (100)	No information available

Target Organs:	Skin. Central nervous system. Peripheral nervous system. Respiratory system. Liver.
Mutagenic Effects:	No information available
Teratogenic Effects:	No information available
Aggravated Medical Conditions:	No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Amyl Acetate	628-63-7	100

4. FIRST AID MEASURES

General Advice:	Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)
Skin Contact:	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.
Eye Contact:	Flush eye with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.
Notes to Physician:	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flashpoint (°C/°F):	16-25 °C/60-77 °F
Flash Point Tested according to:	
Closed cup	
Lower Explosion Limit (%):	1.1%
Upper Explosion Limit (%):	7.5%
Autoignition Temperature (°C/°F	: 360 °C/680 °F

Suitable Extinguishing Media:	Carbon dioxide (CO2). Dry chemical. Alcohol-resistant foam. Water spray.
Unsuitable Extinguishing Media:	Do not use a solid (straight) water stream as it may scatter and spread fire.
Hazardous Combustion Products:	Carbon monoxide ; Carbon dioxide
Specific hazards:	Flammable. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. 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). Fire may produce irritating, corrosive and/or toxic gases.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

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.

6. ACCIDENTAL RELEASE MEASURES

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. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up:

Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

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. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Storage

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 segrated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Bromine. Chlorine. Fluorine. Bases. Acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

Personal Protective Equipment

Eye protection:	Goggles.	
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. Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. 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.	

National occupational exposure limits

United States

U.S Occupational Exposure Limits: Not determined

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
	= 100 ppm TWA	= 525 mg/m³ TWA	= 100 ppm STEL	None
Amyl Acetate - 628-63-7	= 525 mg/m³ TWA			

Canada

Canada Occupational Exposure Limits: Not determined

Components	Alberta	British Columbia	Ontario	Quebec
Amyl Acetate	= 266 mg/m ³ TWA	= 50 ppm TWA	50 ppm TWA 100 ppm	50 ppm TWAEV
628-63-7	= 50 ppm TWA		STEL	266 mg/m ³ TWAEV
			(listed under Pentyl	100 ppm STEV
			acetate, all isomers)	532 mg/m ³ STEV

Australia and Mexico

Occupational Exposure Limits for Australia and Mexico: Not determined

Components	Australia	Mexico
Amyl Acetate	541 mg/m ³ STEL	= 100 ppm TWA
628-63-7	100 ppm STEL 50 ppm TWA 270 mg/m³ TWA	= 530 mg/m³ TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Odor: Banana-like.

Flash point (°C): 16

Autoignition Temperature (°C/°F): 360 °C/680 °F

pH: No information available

Decomposition temperature(°C/°F): No information available

Evaporation rate: 0.42 (n-butyl acetate = 1)

Odor threshold (ppm): 0.054-3.9 (low - detection in air) 53 (irritating concentration) 300 (noticeably irritating to eyes) Solubility: Very soluble in Ethanol Very soluble in Ether Very slightly soluble in water Solubility in Water: 1730 mg/l @ 25 °C

Appearance: No information available

Taste No information available

Lower Explosion Limit (%): 1.1%

Melting point/range(°C/°F): -70.8 °C/-95.44 °F

Specific gravity: 0.874-0.879 @ 20 °C

Bulk density: No information available

Vapor density: 4.5

Partition coefficient (n-octanol/water): 2.3 Color: Colorless.

Molecular/Formula weight: 130.19

Upper Explosion Limit (%): 7.5%

Boiling point/range(°C/°F): 140-150 °C/284-302 °F

Density (g/cm3): No information available

Vapor pressure @ 20°C (kPa): 0.4667-0.667 @ 25 °C

VOC content (g/L): No information available

Miscibility: No information available

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions
Conditions to avoid:	Heat. Ignition sources.
Incompatible Materials:	Oxidizing agents. Bromine. Chlorine. Fluorine. Bases. Acids.
Hazardous decomposition products:	Carbon monoxide. Carbon dioxide.
Possibility of Hazardous Reactions:	No information available
Polymerization:	Hazardous polymerisation does not occur
Corrosivity:	No information available
Special Remarks on Corrosivity:	No information available

11. TOXICOLOGICAL INFORMATION Acute Toxicity

Component Information

Amyl Acetate - 628-63-7

LD50/oral/rat = > 1600 mg/kg Oral LD50 Rat LD50/oral/mouse = No information available LD50/dermal/rat = No information available LD50/dermal/rabbit = No information available LC50/inhalation/rat = >3000 ppm 6 h LC50/inhalation/mouse = No infomation available Other LD50 or LC50information = 7400 mg/kg oral LD50 Rabbit For Amyl Acetate (Mixed isomers) RTECS no. AJ2010000: >20 ml/kg dermal LD50 Rabbit

Product Information

LC50/inhalation/rat >3000 ppm 6 h LC50/Inhalation/mouse No information available LD50/dermal/rabbit No information available LD50/dermal/rat No information available LD50/oral/mouse = No information available LD50/oral/rat = > 1600 mg/kg mg/kg

Local Effects

Skin irritation:	May cause skin irritation. May cause mild to moderate skin irritation.
Eye irritation:	Causes eye irritation. Mild eye irritation. May cause conjunctivitis. May cause conjunctival irritation.
Inhalation:	Irritating to respiratory system May cause conjunctival irritation Symptoms may include coughing and wheezing Symptoms may include coughing and shortness of breath May cause tight feeling in chest and difficulty breathing It may cause pulmonary edema Inhalation of high concentrations of vapors may cause dizziness or suffocation May cause nausea, vomiting May affect respiration May affect the cardiovascular system (cardiac arrhythmias) May affect behavior/central nervous system (excitement) It may affect behavior/central nervous system (somnolence, headache, dizziness, drowsiness, weakness, confusion, delirium, ataxia, giddiness, visual disturbances, unconsciousness, coma)
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause abdominal discomfort.
Sensitization:	No information available

Chronic Toxicity

Chronic Toxicity

Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin. Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Chronic exposure may cause central nervous system effects. This chemical has not been adequately evaluated to determine whether brain or other nerve damage could occur with repeated exposure. However, many solvents and petroleum-based chemicals have been shown to cause such damage. Effects may include reduced memory, and concentration, personality changes (withdrawl, irritability), fatigue, sleep disturbances, reduced coordination, and or/effects on the nerves supplying the internal organs (autonomic nerves) and/or peripheral nerves to the arms and legs (weakness, sensation or feeling of "pins and needles"). Prolonged or repeated inhalation may affect the liver.

Carcinogenic effects: Not considered carcinogenic

Components	NTP	IARC	OSHA HCS - Carcinogens	•	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Amyl Acetate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Mutagenic Effects:		No informatio	on available			
Reproductive Effect	No information available					
Teratogenic Effects:		No information available				
Target Organs:		Skin. Central	nervous syst	em. Peripheral nerv	ous system. Respira	atory system. Liver.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals:		Information given is based on data on the components and the ecotoxicology of similar products
Ecotoxicity effects:	Aquatic environment.	
Aquatic toxicity:		
<i>Amyl Acetate - 628-63-7</i> Freshwater Algae Data: Freshwater Fish Species Data: Water Flea Data:	650 mg/L LC50 Lepom	rococcales(green algae order) 24 h nis macrochirus 96 h static 1 ia affinis (Western mosquitofish) 48 h and 96 h a magna 24 h
Mobility:	No information availab	le
Persistence and degradability:	No information availab	le
Bioaccumulative potential:	No information availab	le

13. DISPOSAL CONSIDERATIONS

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	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Amyl Acetate	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	111
Subsidiary Risk:	Not applicable
Marine Pollutant	No data available
ERG No:	129
DOT RQ (lbs):	No information available
Symbol(s):	R5
Packing Group: Subsidiary Risk: Marine Pollutant ERG No: DOT RQ (Ibs):	Not applicable No data available 129 No information available

TDG (Canada)

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	No information available
Description:	No information available

ADR

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	No information available
Classification Code:	No information available
Description:	No information available
CEFIC Tremcard No:	No information available

IMO / IMDG

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	No information available
Description:	No information available
IMDG Page:	No information available
Marine Pollutant	No information available
EMS:	F-E
MFAG:	No information available
Maximum Quantity:	No information available

RID

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	3
Classification Code:	No information available
Description:	No information available

ICAO

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	No information available
Subsidiary Risk:	No information available
Description:	No information available

ΙΑΤΑ

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	No information available
ERG Code:	3L
Description:	No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	Philippines (PICCS)	KOREA KECL	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Amyl Acetate	Present	Present	KE-01766	Present (2)- 733	Present	Present	Present 211-047-3

U.S. Regulations

Amyl Acetate

Massachusetts RTK: Present New Jersey RTK Hazardous Substance List: Present New Jersey - Discharge Prevention - List of Hazardous Substances: Present Pennsylvania RTK: Environmental hazard Pennsylvania RTK - Environmental Hazard List Present Pennsylvania RTK - Special Hazardous Substances Present RI RTK - Hazardous Substances List: Present Minnesota - Hazardous Substance List: Present New York Release Reporting - List of Hazardous Substances: = 1 lb RQ Louisana Reportable Quantity List for Pollutants: Listed California Directors List of Hazardous Substances: Present

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	Carcinogen		Male Reproductive Toxicity	Female Reproductive Toxicity:
Amyl Acetate	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

	Substances and their	Hazardous	Section 302 Extremely Hazardous Substances and RQs	Chemical Category	Section 313 - Reporting de minimis
-	= 2270 kg final RQ = 5000 lb final RQ	None	None	None	None

U.S. TSCA

	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Amyl Acetate	Not Applicable	01/26/199406/30/1998

Canada

WHMIS hazard class:

B2 Flammable liquid

Amyl Acetate

B2

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Amyl Acetate	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Amyl Acetate	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Manditory Reporting
Amyl Acetate	Not listed	Not listed

EU Classification

R-phrase(s)

R10 - Flammable.

R66 - Repeated exposure may cause skin dryness or cracking.

S -phrase(s)

- S 2 Keep out of the reach of children.
- S23 Do not breathe gas/fumes/vapor/spray.

S25 - Avoid contact with eyes.

Components	Classification	Concentration Limits:	Safety Phrases
Amyl Acetate	R10	No information	S2 S23 S25
	R66		

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

Indication of danger: Flammable

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1/Z129.1-2010 standards.

Preparation Date:	14-Apr-2014
Reason for revision:	Not applicable
Prepared by:	Sonia Owen
Literature reference:	No information available

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. The physical properties reported in this MSDS 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 MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.





SAFETY DATA SHEET

Preparation Date: 4/14/2014	Revision Date: 4/14/2014	Revision Number: G1
	1. IDENTIFICATION	
Product identifier		
Product code:	A1280	
Product Name:	AMYL ACETATE, REAGENT	
Other means of identification		
Synonyms:	Acetate d'amyle (French) Acetic acid, amyl ester Birnenoel Pent-acetate 1-Pentanol acetate Pentyl acetate n-Pentyl acetate 1-Pentyl acetate Primary amyl acetate Amyl acetic ester	
CAS #: RTECS #	628-63-7 AJ1925000	
CI#:	Not available	
Recommended use of the chem	ical and restrictions on use	
Recommended use: Uses advised against	Solvent. Paints. In photographic films and plates. No information available	
Supplier:	Spectrum Chemicals and Laboratory Products, Inc. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000	
Order Online At:	https://www.spectrumchemical.com	
Emergency telephone number Contact Person: Contact Person:	Chemtrec 1-800-424-9300 Martin LaBenz (West Coast) Regina Wachenheim (East Coast)	
	2. HAZARDS IDENTIFICATION	

Classification

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

Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 3

Label elements

Warning

Hazard statements Causes eye irritation May cause respiratory irritation. May cause drowsiness or dizziness Flammable liquid and vapor



Hazards not otherwise classified (HNOC) Not Applicable

Other hazards Causes mild skin irritation

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Avoid breathing dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Keep away from heat/sparks/open flames/hot surfaces. — No smoking Keep container tightly closed Ground/bond container and receiving equipment Use explosion-proof electrical/ventilating/lighting/ .? /equipment Use only non-sparking tools Take precautionary measures against static discharge Wear protective gloves/protective clothing/eye protection/face protection Keep cool

In case of fire: Use CO2, 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. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or

doctor/physician if you feel unwell.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret

Product code: A1280

Product name: AMYL ACETATE, REAGENT

3. COMPOSITION/INFORMATION ON INGREDIENTS						
Amyl Acetate 628-63-7	628-63-7	100	*			

4. FIRST AID MEASURES			
First aid measures General Advice:	Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)		
Skin Contact:	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.		
Eye Contact:	Flush eye with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.		
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.		
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.		
Most important symptoms and effec	ts, both acute and delayed		
Symptoms	Causes eye irritation. May cause skin irritation. Central nervous system effects. Drowsiness. Dizziness. Headache. May cause cardiovascular effects. May affect respiration. Irritating to respiratory system. May cause build-up of fluid in the lungs (pulmonary edema). Dyspnea (Shortness of breath and difficulty breathing). May cause nausea and vomiting.		
Indication of any immediate medical Notes to Physician:	attention and special treatment needed 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:	Carbon dioxide (CO2). Dry chemical. Alcohol-resistant foam. Water spray.
Unsuitable Extinguishing Media:	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:	Flammable. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. 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). Fire may produce irritating, corrosive and/or toxic gases.

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. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.
Methods and material for contain	nment 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).
Methods for cleaning up	Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. 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. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. 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 segrated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Bromine. Chlorine. Fluorine. Bases. Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

U.S Occupational Exposure Limits: Not determined

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
	= 100 ppm TWA	= 525 mg/m³ TWA	= 100 ppm STEL	None
Amyl Acetate - 628-63-7	= 525 mg/m³ TWA			

Canada

Canada Occupational Exposure Limits: Not determined

Components	Alberta	British Columbia	Ontario	Quebec
	= 266 mg/m ³ TWA	= 50 ppm TWA	50 ppm TWA 100 ppm	50 ppm TWAEV
Amyl Acetate - 628-63-7	= 50 ppm TWA		STEL	266 mg/m ³ TWAEV
			(listed under Pentyl	100 ppm STEV
			acetate, all isomers)	532 mg/m ³ STEV

Australia and Mexico

Occupational Exposure Limits for Australia and Mexico: Not determined

Components	Australia	Mexico
Amyl Acetate	541 mg/m ³ STEL	= 100 ppm TWA
628-63-7	100 ppm STEL	= 530 mg/m ³ TWA
	50 ppm TWA	-
	270 mg/m ³ TWA	

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:	Goggles.
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. Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. 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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Odor: Banana-like.

Molecular/Formula weight: 130.19

Flash Point Tested according to: Closed cup

Autoignition Temperature (°C/°F): 360 °C/680 °F

Boiling point/range(°C/°F): 140-150 °C/284-302 °F

Density (g/cm3): No information available

Evaporation rate: 0.42 (n-butyl acetate = 1)

Odor threshold (ppm): 0.054-3.9 (low - detection in air) 53 (irritating concentration) 300 (noticeably irritating to eyes) Miscibility: No information available Appearance: No information available

Taste No information available

Flash point (°C): 16

Lower Explosion Limit (%): 1.1%

pH: No information available

Decomposition temperature(°C/°F): No information available

Bulk density: No information available

Vapor density: 4.5

Partition coefficient (n-octanol/water): 2.3

Solubility: Very soluble in Ethanol Very soluble in Ether Very slightly soluble in water Solubility in Water: 1730 mg/l @ 25 °C Color: Colorless.

Formula: C7-H14-O2

Flashpoint (°C/°F): 16-25 °C/60-77 °F

Upper Explosion Limit (%): 7.5%

Melting point/range(°C/°F): -70.8 °C/-95.44 °F

Specific gravity: 0.874-0.879 @ 20 °C

Vapor pressure @ 20°C (kPa): 0.4667-0.667 @ 25 °C

VOC content (g/L): No information available

Viscosity: No information available

10. STABILITY AND REACTIVITY

Reactivity Reactive with oxidizing agents Reacts with bases Reactive with acids

Chemical stability Stability:	Stable at normal conditions
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur
Conditions to avoid:	Heat. Ignition sources.
Incompatible Materials:	Oxidizing agents. Bromine. Chlorine. Fluorine. Bases. Acids.
Hazardous decomposition products:	Carbon monoxide. Carbon dioxide.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

Information on likely routes of exposure

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

Acute Toxicity

Component Information

Amyl Acetate - 628-63-7 LD50/oral/rat = > 1600 mg/kg Oral LD50 Rat LD50/oral/mouse = No information available LD50/dermal/rabbit = No information available LD50/dermal/rat = No information available LC50/inhalation/rat = >3000 ppm 6 h LC50/inhalation/mouse = No infomation available Other LD50 or LC50information = 7400 mg/kg oral LD50 Rabbit For Amyl Acetate (Mixed isomers) RTECS no. AJ2010000: >20 ml/kg dermal LD50 Rabbit

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = >1600mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = No information available

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

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

LC50/inhalation/rat VALUE-Vapor = No information available VALUE-Gas = >3000ppm (6-hr) VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse VALUE-Vapor = No information available VALUE - Gas = No information available VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	May cause skin irritation. Mildly to moderately irritating to the skin. It may cause dermatitis. It may be absorbed through the skin.
Eye Contact:	Causes eye irritation. Mild eye irritation. May cause conjunctival irritation. May cause conjunctivitis.

Inhalation	Irritating to respiratory system. May cause conjunctival irritation. May affect respiration. Symptoms may include coughing and shortness of breath. May cause tight feeling in chest and difficulty breathing. It may cause pulmonary edema. Inhalation of high concentrations of vapors may cause dizziness or suffocation. May cause nausea, vomiting. May affect the cardiovascular system (cardiac arrhythmias). May affect behavior/central nervous system (excitement). It may affect behavior/central nervous system (somnolence, headache, dizziness, drowsiness, weakness, confusion, delirium, ataxia, giddiness, visual disturbances, unconsciousness, coma). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause abdominal discomfort.
Aspiration hazard	No information available
Delayed and immediate effects a	as well as chronic effects from short and long-term exposure
Chronic Toxicity Sensitization:	Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin. Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Chronic exposure may cause central nervous system effects. This chemical has not been adequately evaluated to determine whether brain or other nerve damage could occur with repeated exposure. However, many solvents and petroleum-based chemicals have been shown to cause such damage. Effects may include reduced memory, and concentration, personality changes (withdrawl, irritability), fatigue, sleep disturbances, reduced coordination, and or/effects on the nerves supplying the internal organs (autonomic nerves) and/or peripheral nerves to the arms and legs (weakness, sensation or feeling of "pins and needles"). Prolonged or repeated inhalation may affect the liver. No information available
Mutagenic Effects:	No information available

Carcinogenic effects:

Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Amyl Acetate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

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:	Skin. Central nervous system. Peripheral nervous system. Respiratory system. Liver.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:

Aquatic environment.

Product code: A1280

Product name: AMYL ACETATE, REAGENT

Amyl Acetate - 628-63-7 Freshwater Algae Data: Freshwater Fish Species Data: Water Flea Data:	1300 mg/I EC50 Chlorococcales(green algae order) 24 h 650 mg/L LC50 Lepomis macrochirus 96 h static 1 65 mg/I LC50 Gambusia affinis (Western mosquitofish) 48 h and 96 h 210 mg/I LC50 Daphnia magna 24 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	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Amyl Acetate	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Subsidiary Risk:	Not applicable
Packing Group:	III
Marine Pollutant	No data available
ERG No:	129
DOT RQ (lbs):	No information available
Symbol(s):	R5

TDG (Canada)

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
Description:	No information available

ADR

UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Packing Group:	III

14. TRANSPORT INFORMATION

	14. TRANSFORT INFORMATION
Subsidiary Risk:	No information available
Classification Code:	No information available
Description:	No information available
CEFIC Tremcard No:	No information available
IMO / IMDG	
UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	
Description:	No information available
IMDG Page:	No information available
Marine Pollutant	No information available
EMS:	F-E
MFAG:	No information available
Maximum Quantity:	No information available
RID	
UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Subsidiary Risk:	3
Packing Group:	III No information available
Classification Code:	No information available
Description:	No information available
ICAO	
UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	
Description:	No information available
-	
ΙΑΤΑ	
UN-No:	UN1104
Proper Shipping Name:	Amyl acetates
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
ERG Code:	3L
Description:	No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Amyl Acetate	Present	KE-01766	Present	Present (2)- 733	Present	Present	Present 211-047-3

U.S. Regulations

Amyl Acetate

Massachusetts RTK: Present New Jersey RTK Hazardous Substance List: Present New Jersey - Discharge Prevention - List of Hazardous Substances: Present Pennsylvania RTK: Environmental hazard Pennsylvania RTK - Environmental Hazard List Present Pennsylvania RTK - Special Hazardous Substances Present RI RTK - Hazardous Substances List: Present Minnesota - Hazardous Substance List: Present New York Release Reporting - List of Hazardous Substances: = 1 lb RQ Louisana Reportable Quantity List for Pollutants: Listed

California Directors List of Hazardous Substances: Present

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	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Amyl Acetate	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

•	Substances and their	Hazardous	Section 302 Extremely Hazardous Substances and RQs	Chemical Category	Section 313 - Reporting de minimis
,	= 2270 kg final RQ = 5000 lb final RQ	None	None	None	None

U.S. TSCA

	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Amyl Acetate	Not Applicable	01/26/199406/30/1998

Canada

WHMIS hazard class:

B2 Flammable liquid

Amyl Acetate

B2

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Amyl Acetate	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Amyl Acetate	Present	Not Listed

Components		CEPA - 2010 Greenhouse Gases Subject to Manditory
		Reporting
Amyl Acetate	Not listed	Not listed

EU Classification

R-phrase(s)

R10 - Flammable.

R66 - Repeated exposure may cause skin dryness or cracking.

S -phrase(s) S 2 - Keep out of the reach of children. S23 - Do not breathe gas/fumes/vapor/spray.

S25 - Avoid contact with eyes.

Components	Classification	Concentration Limits:	Safety Phrases
Amyl Acetate	R10	No information	S2 S23 S25
	R66		

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

Indication of danger: Flammable

16. OTHER INFORMATION

16. OTHER INFORMATION				
NFPA	HMIS	Personal Protective Equipment		
30	Health Hazard1Fire Hazard3Reactivity0			
		See Section 8.		
Preparation Date: 4/14/	2014			

4/14/2014 Sonia Owen

Revision Date: Prepared by:

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 Material Safety Data Sheet