

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H313+H333	May be harmful in contact with skin or if inhaled
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking
P242	Use only non-sparking tools
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P270	Do not eat, drink or smoke when using this product
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352	IF ON SKIN: Wash with plenty of soap and water
P303+P361+P351	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse continuously with water for several minutes.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor/physician
P330	Rinse mouth
P332+P313	If skin irritation occurs: Get medical advice/attention
P403+233	Store in a well-ventilated place. Keep container tightly closed
P501	Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION AND INFORMATION ON INGREDIENTS
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Chemical Name	CAS No	Weight-%
n-Butyl Alcohol	71-36-3	20-40
1-Methoxy-2-propanol	107-98-2	10-20
Ethyl Alcohol	64-17-5	5-25
2-Propanol	67-63-0	2-15
Propyl Acetate	109-60-4	0-5

4. FIRST AID MEASURES

First Aid Measures**Ingestion:**

If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Eyes:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin: Remove contaminated clothing. Wash off with soap and plenty of water. Consult a physician.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Most important symptoms and effects

Symptoms Eye contact may result in redness, pain, blurred vision, burning sensation. Skin contact may result in irritation, defatting or dermatitis. Inhalation may cause drowsiness or dizziness. Inhalation may cause respiratory tract irritation. Ingestion may cause nausea, vomiting, dizziness and headache.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIREFIGHTING MEASURES

Suitable extinguishing media:
Water fog, Multipurpose foam, Dry chemical, CO₂

Unsuitable extinguishing media:
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards in case of fire:
Fight as volatile liquid fire
Flashback fires may occur
Vapors are dense and may travel to remote ignition source

Hazardous combustion products:
Carbon oxides, Nitrogen oxides, organic combustion products which may be toxic and/or irritating

Protective equipment and precautions for fire fighters:
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:
Wear chemical goggles, gloves, boots and protective clothing. Wear respirator if necessary. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition and heat.

Environmental precaution:
Prevent additional discharge of material. Prevent material from entering sewers or water courses.

Methods and materials for containment and cleaning up:
Absorb small spills with sand, filter-aid, vermiculite or other inert absorbent material, then place in a chemical waste container. For large spills, contain with sand or earth dikes. Dispose of waste in accordance with applicable government regulations.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with eyes. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing and eye/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Unscrew all caps slowly. Do not unscrew entirely until all pressure has been completely released. Keep away from heat/sparks/open flames/hot surfaces. Emptied containers may retain residues. Precautions apply to emptied containers.

Conditions for safe storage, including incompatibilities:

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep storage temperature between 4-32 °C (40-90 °F). Incompatible with strong oxidizing agents, strong acids, strong bases, alkali metals and halogens.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name and CAS#	ACGIH TLV	OSHA PEL	NIOSH IDLH
n-Butyl Alcohol 71-36-3	TWA: 20 ppm	TWA: 100 ppm TWA: 300 mg/m ³	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m ³ skin
1-Methoxy-2-propanol 107-98-2	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 360 mg/m ³ STEL: 150 ppm STEL: 540 mg/m ³	TWA: 100 ppm TWA: 360 mg/m ³ STEL: 150 ppm STEL: 540 mg/m ³
Ethyl Alcohol 64-17-5	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
2-Propanol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³
Propyl Acetate 109-60-4	TWA: 200 ppm TWA: 840 mg/m ³ STEL: 250 ppm STEL: 1025 mg/m ³	TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³	IDLH: 1700 ppm TWA: 200 ppm TWA: 840 mg/m ³ STEL: 250 ppm STEL: 1050 mg/m ³

Appropriate engineering controls

Apply technical measures to comply with the occupational exposure limits. Local exhaust and mechanical ventilations are recommended to be used as engineering controls.

Individual protection measures, such as personal protective equipment:

Eye/Face protection: Safety glasses with side shields or chemical goggles must be worn.

Skin/Body protection: Wear protective gloves. Wear suitable protective clothing and footwear appropriate for the risk of exposure.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General hygiene: Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<u>Property</u>	<u>Values</u>	<u>Remarks-Methods</u>
Physical state:	Liquid	
Odor:	Moderate	
Odor threshold:	Not determined	
pH:	Not determined	
Melting point/freezing point:	Not determined	
Boiling point/Boiling range:	Not determined	
Flash point:	23.3 °C / 74 °F	Tag Closed Cup
Evaporation Rate:	<1	butyl acetate = 1
Flammability (solid, gas):	Not determined	
Upper/lower flammability limits:	Not determined	
Vapor pressure:	Not determined	
Vapor density:	>1	air = 1
Specific gravity:	0.9 - 0.98	water = 1
Water solubility:	Partially soluble	
Solubility in other solvents:	Not determined	
Partition Coefficient:	Not determined	
Auto-ignition Temperature:	Not determined	
Decomposition temperature:	Not determined	
Viscosity:	8-20 cps	
VOC Content (%):	90 %	
VOC Content:	6.7 – 7.3 lbs/gal	

10. STABILITY AND REACTIVITY

Reactivity:

Not reactive under normal conditions.

Chemical Stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

None under normal processing.

Conditions to avoid:

Keep out of reach of children. Keep away from heat, sparks and open flame. Keep away from contact with incompatible materials.

Incompatible materials:

Strong oxidizing agents, strong acids, strong bases, alkali metals, halogens

Hazardous decomposition products:

Carbon oxides, nitrogen oxides, thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact: Causes serious eye damage

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Revision Date: 5/8/2015

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Skin contact: Causes skin irritation

Inhalation: May cause respiratory irritation. May cause drowsiness or dizziness.

Ingestion: Harmful if swallowed

Component Information:

Chemical Name and CAS#	Oral LD50	Dermal LD50	Inhalation LC50
n-Butyl Alcohol 71-36-3	= 790 mg/kg (Rat)	= 5,620 mg/kg (Rabbit)	>17.9 mg/l (Rat) 4 h
1-Methoxy-2-propanol 107-98-2	= 4,016 mg/kg (Rat)	>2,000 mg/kg (Rabbit)	= 25.8 mg/l (Rat) 5h
Ethyl Alcohol 64-17-5	= 2,000 mg/kg (Rat)	>2,000 mg/l (Rabbit)	>20 mg/l (Mouse) 4h
2-Propanol 67-63-0	= 5,045 mg/kg (Rat)	= 12,800 mg/kg (Rabbit)	= 16,000 mg/ m ³ (Rat) 8 h
Propyl Acetate 109-60-4	= 9,370 mg/kg (Rat)	= 17,740 mg/kg (Rabbit)	No data available

Information on physical, chemical and toxicological effects:

Symptoms Please see section 4 of this SDS for symptoms

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

Carcinogenicity:

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Propanol 67-63-0		Group 3		

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B – Limited evidence of carcinogenicity
Group 3 IARC components are "not classifiable as human carcinogens"
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical measures of toxicity:

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity:

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Component Information

Chemical Name and CAS#	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
n-Butyl Alcohol 71-36-3	EC50 - Desmodemus subspicatus - 500 mg/L - 72h	LC50 - Pimephales promelas - 1840 mg/L - 96 h		EC50 - Daphnia magna - 1983 mg/L - 48 h
1-Methoxy-2-propanol 107-98-2		LC50 - Pimephales promelas - 20,800 mg/L - 96h		EC50 - Daphnia magna - 23,300 mg/L - 48h
Ethyl Alcohol 64-17-5		LC50 - Pimephales promelas - 15,300 mg/L - 96h	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	EC50 - Daphnia magna - 9268 - 14221 mg/L - 48h
2-Propanol 67-63-0	EC50 - Desmodemus subspicatus - 2000 mg/L - 72h	LC50 - Pimephales promelas - 9,640 mg/L - 96h		EC50 - Daphnia magna - 5,102 mg/L - 96h
Propyl Acetate 109-60-4				EC50 - Daphnia magna - 318 mg/L - 24h

Persistence/Degradability:

Not determined

Bioaccumulation:

Not determined

Mobility:

Not determined

Other Adverse Effects:

No data available

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes:

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

Contaminated Packaging:

Dispose of as unused product in accordance with applicable regional, national and local laws and regulations.

SECTION 14 – TRANSPORTATION INFORMATION

DOT

UN number 1210
Proper shipping name PRINTING INK
Hazard class 3
Packing group III
ERG# 129

IATA

UN number 1210
Proper shipping name PRINTING INK
Hazard class 3
Packing group III

IMDG

UN number 1210

Proper shipping name PRINTING INK
Hazard class 3
Packing group III
Marine pollutant No

SECTION 15 – REGULATORY INFORMATION

TSCA STATUS: All Components listed

OTHER REGULATORY:

<u>Ingredient(s)</u>	<u>SARA 302</u>	<u>SARA 311/312</u>	<u>SARA 313</u>	<u>RECRA</u>	<u>CERCLA</u>
n-Butyl Alcohol	No	F, A, C	Yes	U031	No
1-Methoxy-2-propanol	No	F, A, C	No	No	No
Ethyl Alcohol	No	F, C	No	No	No
2-Propanol	No	F, A, C	Yes	No	No
Propyl Acetate	No	F, A	No	No	No

SARA 311/312 Codes: R = Reactive Hazard
P = Pressure Hazard
F = Fire Hazard
A = Immediate/Acute
C = Delayed/Chronic

California Prop. 65 Components: Chemicals known to the state of California to cause birth defects or other reproductive harm:

This product does not contain any chemicals known to the state of California to cause cancer, birth defects or any other reproductive harm.

SECTION 16 – OTHER INFORMATION

HMIS:

Health: 2
Chronic Health Hazard *

Flammability: 3
Reactivity: 0

Revision Date: 08-May-2015

Replaces: 19-Jan-2015

Revision Note: Update. Correction to Oral toxicity classification in Section 2 and update to other information in Section 2 & 11 due to new SDS from suppliers.

Prepared by: Don Wright

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