Valve Action Invisible Paint marker

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/14/2013 Revision date: 01/06/2015 Supersedes: 09/12/2011

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures

Product name. : Valve Action Invisible Paint marker

Product code : TDTUV100

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Crime Scene Investigation

1.3. Details of the supplier of the safety data sheet

SIRCHIE Finger Print Laboratories
100 Hunter Place
Youngsville, NC 27596 - USA
T 919-554-2244; 800-356-7311 - F 919-554-2266; 800-899-8181
http://www.sirchie.com

1.4. Emergency telephone number

Emergency number : 1.800.424.9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 2 H225
Eye Irrit. 2A H319
Carc. 1A H350
STOT SE 3 H336

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H350 - May cause cancer
Manufacturer states all other ingredient information is proprietary or non-hazardous as defined by the Hazard Communications Standard (29 CFR 1910.1200)

USA: This product is not a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Evaluation. This product meets the definition of an “article”.

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from open flames, sparks, hot surfaces, heat. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing fume, vapors, spray, mist, gas
P264 - Wash all exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective gloves
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for

breathing
P305+P351+P338 - If in eyes: Rinse cautiously 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
P312 - Call a POISON CENTER/doctor/physician if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention
P370+P378 - In case of fire: Use CO2, dry chemical, foam, water spray for extinction
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P403+P235 - Store in a cool and well-ventilated place
P405 - Store locked up
P501 - Dispose of contents/container to local/regional/national/international regulations

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

Full text of H-phrases: see section 16

3.2. Mixtures

Name	Product identifier	%	Classification (GHS-US)
1-methoxy-2-propanol	(CAS No) 107-98-2	40 - 70	Flam. Liq. 3, H226 STOT SE 3, H336
ethanol	(CAS No) 64-17-5	10 - 16	Flam. Liq. 2, H225 Carc. 1A, H350
1-propanol	(CAS No) 71-23-8	0.5 - 2.5	Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336
ethyl acetate	(CAS No) 141-78-6	0.1 - 1.1	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Proprietary Formulation			Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity : No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1-methoxy-2-propanol (107-98-2)		
USA ACGIH	ACGIH TWA (ppm)	100 ppm
USA ACGIH	ACGIH STEL (ppm)	150 ppm

ethanol (64-17-5)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm

ethyl acetate (141-78-6)		
USA ACGIH	ACGIH TWA (ppm)	400 ppm

1-propanol (71-23-8)		
USA ACGIH	ACGIH TWA (ppm)	100 ppm

8.2. Exposure controls

Personal protective equipment : Gas mask. Gloves. Safety glasses. Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear approved mask.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless liquid or gas at ambient temperatures.
Color	: Colorless.
Odor	: odorless.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7). Not established.

10.3. Possibility of hazardous reactions

No reactivity hazard other than the effects described in sub-sections below. Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Sparks.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1-methoxy-2-propanol (107-98-2)	
LD50 oral rat	6600 mg/kg (4016 mg/kg bodyweight; Rat; Rat; Other; Experimental value,4016 mg/kg bodyweight; Rat; Rat; Other; Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; Other,Rat; Experimental value; Other,Rat; Experimental value; Other)
LD50 dermal rabbit	13000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	55 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	15000 ppm/4h (Rat)

ethanol (64-17-5)	
LD50 oral rat	10740 mg/kg body weight (Rat; Experimental value,Rat; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit)

ethyl acetate (141-78-6)	
LD50 oral rat	5620 mg/kg (10200 mg/kg bodyweight; Rat; Rat; Experimental value,10200 mg/kg bodyweight; Rat; Rat; Experimental value)
LD50 dermal rabbit	> 18000 mg/kg (>20000 mg/kg bodyweight; Rabbit; Rabbit; Experimental value,>20000 mg/kg bodyweight; Rabbit; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	70.56 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	19600 ppm/4h (Rat)

1-propanol (71-23-8)	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	4049 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	9.8 mg/l/4h (Rat)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : May cause cancer.

ethanol (64-17-5)	
IARC group	1 - Carcinogenic to Humans

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure) : Not classified

Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

1-methoxy-2-propanol (107-98-2)	
LC50 fish 1	4600 - 10000 mg/l (96 h; Leuciscus idus; NOMINAL CONCENTRATION)
EC50 Daphnia 1	23300 mg/l (48 h; Daphnia magna; NOMINAL CONCENTRATION)
LC50 fish 2	20800 mg/l (96 h; Pimephales promelas)
Threshold limit algae 1	> 1000 mg/l (168 h; Pseudokirchneriella subcapitata; GROWTH RATE)

ethanol (64-17-5)	
LC50 fish 1	14200 mg/l (96 h; Pimephales promelas; NOMINAL CONCENTRATION)
EC50 Daphnia 1	9300 mg/l (48 h; Daphnia magna)
LC50 fish 2	13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)

ethanol (64-17-5)	
Threshold limit other aquatic organisms 1	65 mg/l (72 h; Protozoa)
Threshold limit algae 1	1450 mg/l (192 h; Microcystis aeruginosa; GROWTH RATE)
Threshold limit algae 2	5000 mg/l (168 h; Scenedesmus quadricauda; GROWTH RATE)

ethyl acetate (141-78-6)	
LC50 fish 1	454.7 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	2500 mg/l (24 h; Daphnia magna)
LC50 fish 2	230 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2	154 mg/l (48 h; Daphnia magna)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	2000 mg/l (96 h; Selenastrum capricornutum; BIOMASS)
Threshold limit algae 2	15 mg/l (192 h; Scenedesmus quadricauda; GROWTH RATE)

1-propanol (71-23-8)	
LC50 fish 1	3200 mg/l (48 h; Salmo gairdneri (Oncorhynchus mykiss); Flow-through system)
EC50 Daphnia 1	4415 mg/l (24 h; Daphnia magna)
EC50 other aquatic organisms 1	4168 mg/l (48 h; Protozoa)
LC50 fish 2	4480 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2	3644 mg/l (48 h; Daphnia magna)
TLM fish 1	200 - 500,Gobio gobio
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	2000 mg/l (Selenastrum capricornutum)
Threshold limit algae 2	3100 mg/l (168 h; Scenedesmus quadricauda)

12.2. Persistence and degradability

Valve Action Invisible Paint marker	
Persistence and degradability	Not established.

1-methoxy-2-propanol (107-98-2)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
ThOD	1.95 g O^2/g substance

ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O^2/g substance
Chemical oyxgen demand (COD)	1.70 g O^2/g substance
ThOD	2.10 g O^2/g substance
BOD (% of ThOD)	0.43 % ThOD

ethyl acetate (141-78-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.293 g O^2/g substance
Chemical oyxgen demand (COD)	1.69 g O^2/g substance
ThOD	1.82 g O^2/g substance
BOD (% of ThOD)	36 - 68 % ThOD

1-propanol (71-23-8)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions.
Biochemical oxygen demand (BOD)	0.47 - 1.63 g O^2/g substance
Chemical oyxgen demand (COD)	2.23 g O^2/g substance
ThOD	2.4 g O^2/g substance
BOD (% of ThOD)	20 - 44 % ThOD

12.3. Bioaccumulative potential

Valve Action Invisible Paint marker	
Bioaccumulative potential	Not established.

1-methoxy-2-propanol (107-98-2)	
BCF fish 1	1 (Pimephales promelas)
Log Pow	-0.46 (< 1; Estimated value; Experimental value; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

ethanol (64-17-5)	
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

ethyl acetate (141-78-6)	
BCF fish 1	30 (3 days; Leuciscus idus)
Log Pow	0.68 (Experimental value; 25 °C,Experimental value; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1-propanol (71-23-8)	
Log Pow	0.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

ethanol (64-17-5)	
Surface tension	0.022 N/m (20 °C)

ethyl acetate (141-78-6)	
Surface tension	0.024 N/m (20 °C)

1-propanol (71-23-8)	
Surface tension	0.024 N/m (20 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Valve Action Invisible Paint marker
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11
R67

Full text of R-phrases: see section 16

15.2.2. National regulations

Valve Action Invisible Paint marker
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

Valve Action Invisible Paint marker()	
U.S. - California - Proposition 65 - Carcinogens List	Yes

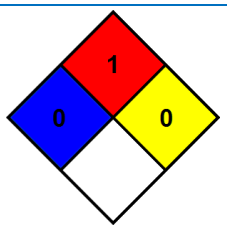
SECTION 16: Other information

Indication of changes	:	Revision - See : *.
Data sources	:	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Training advice	:	Normal use of this product shall imply use in accordance with the instructions on the packaging. Keep in tightly closed container. Keep cool and dry. Avoid all ignition sources - heat, open flame, sparks. Avoid incompatible materials. Avoid dust creation and accumulation. Avoid inhalation and ingestion. Avoid contact with eyes. Wash thoroughly after handling.
Other information	:	None.

Full text of H-phrases: see section 16:

Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H318	Causes serious eye damage
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H350	May cause cancer

NFPA health hazard	:	0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	:	1 - Must be preheated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	:	0 Minimal Hazard - No significant risk to health
Flammability	:	1 Slight Hazard
Physical	:	0 Minimal Hazard
Personal Protection	:	G

SDS US (GHS HazCom 2012)

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