

SAFETY DATA SHEET, revised 23 February 2016, printed 23 February 2016 10:19

1146 Waterborne Traffic Marking Paint Yellow**1. PRODUCT AND COMPANY INFORMATION**

Trade name 1146 Waterborne Traffic Marking Paint Yellow
 Product codes ZB1146, B1146, 1146, Waterborne Traffic Marking Paint Yellow
 Chemical family Aqueous pigmented resin solution
 Intended use Road marking

Company Colorado Paint Company II, LLC (a Swarco Company)
 4747 Holly Street
 Denver, CO 80216; U. S. A.

Telephone +1 303-388-9265
 Web site www.swarco.com/americas
 Emergency (Chemtrec; 24 h) 1-800-424-9300 (U. S. A. and Canada)

2. HAZARD IDENTIFICATION**Emergency Overview****OSHA Hazards**

Target Organ Effect, Irritant

Target Organs

Liver, Kidney

GHS Classification

Specific target organ toxicity - single exposure (Category 2)

Carcinogenicity (Category 1A)

Skin irritation (Category 2)

Eye irritation (Category 2A)

GHS Label elements, including precautionary statements

Pictograms:

Signal word: Danger**Hazard statements**

H303 May be harmful if swallowed.

H316 Causes mild skin irritation.

H317 May cause an allergic skin reaction.

H320 Causes eye irritation.

H335 May cause respiratory irritation.

350 May cause cancer.

H371 May cause damage to organs

Precautionary statements

P260 Do not breathe dust / fume / gas / mist / vapours / spray.

P281 Use personal protective equipment as required.

P302+352 IF ON SKIN: Wash with soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS and NFPA Classification:

| | HMIS | NFPA Hazard |
|-----------------|------|-------------|
| Health | 2* | 2 |
| Flammability | 1 | 1 |
| Reactivity | — | 0 |
| Physical hazard | 0 | — |

1146 Waterborne Traffic Marking Paint Yellow**Potential Health Effects****Inhalation:** May be harmful if inhaled.**Skin:** May cause skin irritation.**Eyes:** Causes severe eye irritation.**Ingestion:** May be harmful if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.**3. COMPOSITION**

| Name | Synonym | CAS | EINECS | Index | Concentration |
|---|--------------------|------------|-----------|--------------|---------------|
| Calcium carbonate | Limestone | 1317-65-3 | 207-439-9 | — | 30-60% |
| Acrylic resin | Polymeric material | n/a | n/a | — | 10-50% |
| 3-Hydroxy-2,2,4-trimethylpentyl 2-methylpropanoate | Hydroxy ester | 25265-77-4 | 246-771-9 | — | 1-10% |
| Titanium dioxide | Titanium(IV) oxide | 13463-67-7 | 236-675-5 | — | 1-10% |
| Methanol | Methyl alcohol | 67-56-1 | 200-659-6 | 603-001-00-X | 1-5% |
| 2-[(4-Methoxy-2-nitrophenyl)azo]-N-(2-methoxyphenyl)-3-oxo-butylamide | Pigment yellow 65 | 6528-34-3 | 229-419-9 | — | 1-5% |
| Ammonium hydroxide | — | 1336-21-6 | 215-647-6 | 007-001-01-2 | 0.1-0.5% |
| Crystalline silica | Quartz | 14464-46-1 | 238-878-4 | — | 0.1-0.5% |

4. FIRST AID MEASURES**General advice**

Consult a physician. Show this Safety Data Sheet to the attending doctor.

If inhaled

Move person to fresh air. If not breathing, give artificial respiration. Obtain proper medical attention.

If on skin

Wash off with soap and water. Consult a physician if needed.

In case of an eye contact

Rinse thoroughly with plenty of running water for at least 15 minutes. Seek medical attention.

If swallowed

Rinse mouth with water. Seek immediate medical attention.

Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

5. FIRE FIGHTING MEASURES**Suitable extinguishing media**

Product as delivered is water-based and shall not burn.

For dried material that is burning, use water, "alcohol" foam, dry chemical, or carbon dioxide.

Special protective equipment for fire fighters

Do not enter the fire area without proper protection.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions: Carbon oxides, calcium oxide, nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate unnecessary personnel to safe areas.

Environmental precautions

Prevent leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, clean affected area using a strong detergent solution. Collect and place in suitable closed container for disposal according to local regulations.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Avoid contact with skin.

Conditions for safe storage

Keep container tightly closed. Recommended storage temperature is 10-30 °C. Do not permit to freeze.

1146 Waterborne Traffic Marking Paint Yellow**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION****Occupational exposure limits**

Occupational exposure limits for the product as delivered have not been established.

Information below is provided for individual ingredients, where available. No occupational exposure limits have been established for other ingredients, which does not imply that they might not be harmful or toxic. Unknown hazards may exist and/or the materials may have not been fully tested. The user is required to follow all of the good industrial hygiene practices

Occupational exposure limits

Calcium carbonate (CAS 1317-65-3):

OSHA Permissible Exposure Limit (PEL) for General Industry: 29 CFR 1910.1000 Table Z-1: 15 mg/m³ TWA

OSHA Permissible Exposure Limit (PEL) for Maritime: 29 CFR 1915.1000 Table Z-Shipyards: 15 mg/m³ TWA

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV): 10 mg/m³ TWA;

The value is for particulate matter containing no asbestos and <1% crystalline silica.

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL): 10 mg/m³ TWA

Not considered a hazardous substance. Provided exposure limits are established for respirable dust only, particulate matter containing less than 1% of asbestos. They are meaningless for the paint product as delivered, but apply while sanding or abrading dried coating.

Crystalline silica (CAS 14464-46-1):

OSHA Permissible Exposure Limit (PEL) for General Industry: 29 CFR 1910.1000 Table Z-3: Limit for dust is calculated per formula: (10 mg/m³) / (%SiO₂+2).

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV): 0.05 mg/m³ TWA; (Respirable fraction).

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL): 0.05 mg/m³ TWA; Potential Carcinogen.

NIOSH Immediately Dangerous to Life and Health (IDLH) concentration: 25 mg/m³.

The established limits are for respirable dust only and are meaningless for the paint product as delivered, but apply while sanding or abrading dried coating.

Carcinogenic Classification: International Agency for Research on Cancer (IARC): Group 2A, probably carcinogenic to humans. Health Effects: Pneumoconiosis.

Methanol (CAS 67-56-1):

OSHA Permissible Exposure Limit (PEL) for General Industry: 29 CFR 1910.1000 Table Z-1: 200 ppm, 260 mg/m³ TWA.

OSHA PEL for Construction Industry: 29 CFR 1926.55 Appendix A: 200 ppm, 260 mg/m³ TWA.

OSHA PEL for Maritime Industry: 29 CFR 1915.1000 Table Z-Shipyards: 200 ppm, 260 mg/m³ TWA.

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV): 200 ppm, 262 mg/m³ TWA; 250 ppm, 327 mg/m³ STEL; Skin.

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL): 200 ppm, 260 mg/m³ TWA; 250 ppm, 325 mg/m³ STEL; Skin.

NIOSH Immediately Dangerous to Life and Health (IDLH) concentration: 6,000 ppm, 7860 mg/m³

Titanium dioxide (CAS 13463-67-7):

OSHA Permissible Exposure Limit (PEL) for General Industry: 29 CFR 1910.1000 Table Z-1: 15 mg/m³ TWA

OSHA Permissible Exposure Limit (PEL) for Maritime: 29 CFR 1915.1000 Table Z-Shipyards: 15 mg/m³ TWA

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV): 10 mg/m³ TWA; Appendix A4 - Not Classifiable as a Human Carcinogen.

National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL): Fine particles: 2.4 mg/m³, Ultrafine particles: 0.3 mg/m³. Appendix A: NIOSH Potential Occupational Carcinogens.

NIOSH Immediately Dangerous to Life and Health (IDLH) concentration: 25 mg/m³.

The established limits are for respirable dust only and are meaningless for the paint product as delivered, but apply while sanding or abrading dried coating.

Lower Respiratory Tract irritation. Slight lung fibrosis (carcinogenic in rats). Health Effect: Nuisance particulate, accumulation in lungs. Not classifiable as a human carcinogen. No increase in risk for lung cancer (or any other specific cause of death) was reported among titanium dioxide manufacturing workers.

Ventilation

Use only where appropriate ventilation is available. This product is designed for outdoor use by trained professional personnel only.

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Personal protective equipment

Respiratory protection

When used as designed, outdoors in a well-ventilated area, exceeding of the exposure limits is very unlikely unless caused by intentional misuse.

When the exposure limits are exceeded or when working indoors, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) cartridges.

When sanding or abrading dried film, type N95 (US) or type P1 (EN 143) dust masks are suggested.

Hand protection

Handle with gloves that satisfy the specifications of the standard EN 374. Dispose of contaminated gloves after use in accordance with applicable laws and good work hygiene practices.

Eye protection

Safety glasses with side shields are required. Tightly fitting splash goggles are recommended. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection

Wear protective clothing.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash your hands thoroughly. Never intentionally inhale the contents. Use only for the intended purpose.

9. PHYSICAL PROPERTIES

| | |
|-----------------------|---------------------------|
| Physical state | Viscous liquid |
| Color | Yellow |
| Odor | Mild latex paint, ammonia |
| Boiling point | ±100 °C |
| Freezing point | ±0 °C |
| Flash point | ≥200°F (93.3°C) |
| Upper explosion limit | No data available |
| Lower explosion limit | No data available |
| Solubility in water | Waterborne product |
| Vapor pressure | No data available |
| Density | 1.5-2.0 g/ml |
| Viscosity | 80-100 KU at 25 °C |
| pH | 9.0-12.0 |

10. STABILITY AND REACTIVITY DATA

Chemical stability

Stable.

Possibility of hazardous reactions

None known.

Conditions to avoid

Do not freeze or expose to extreme heat as coalescing may occur.

Materials to avoid

Acids, oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.

Other decomposition products: No data available

11. TOXICOLOGICAL DATA

Information for the product as delivered is not available. Data for the individual ingredients is provided below.

Germ cell mutagenicity

| | |
|------------------|--|
| Titanium dioxide | Genotoxicity in vitro – hamster – ovary: Micronucleus test. |
| | Genotoxicity in vitro – hamster – lungs: DNA inhibition. |
| | Genotoxicity in vitro – hamster – ovary: Sister Chromatoid exchange. |
| | Genotoxicity in vivo – mouse – Intraperitoneal: Micronucleus test. |

Other ingredients No data available.

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Acute toxicity

| Name | Oral LD ₅₀ (mg/kg) rat | Inhalation LC ₅₀ (mg/m ³ /4 h) rat | Dermal LD ₅₀ (mg/kg) rabbit |
|--------------------|--|---|---|
| Ammonium hydroxide | 350 (Gastrointestinal, Liver, Kidney, Ureter, and Bladder) | No data available. | No data available. |
| Calcium carbonate | 6,450 | No data available. | No data available. |
| Hydroxy ester | 3,200 | >3,550 | >15,200 |
| Methyl alcohol | 5,628 | 83,840 | 15,800 |
| Pigment yellow 65 | >5,000 (Not tested: Data from similar products.) | No data available. | No data available. |
| Titanium dioxide | >10,000 | No data available. | >10,000 |
| Other ingredients | No data available. | No data available. | No data available. |

Prolonged Exposure

| Name | Skin corrosion / irritation | Serious eye damage / irritation | Respiratory or skin sensitization |
|--------------------|---|--|-----------------------------------|
| Ammonium hydroxide | No data available. | Rabbit: Severe eye irritation | No data available. |
| Calcium carbonate | Rabbit: No skin irritation (OECD Test Guideline 404) | Rabbit: Mild eye irritation (OECD Test Guideline 405) | No data available. |
| Methanol | Rabbit: Skin irritation (24 h) | Rabbit: Eye irritation (24 h) | No data available. |
| Pigment yellow 65 | No data available. | Not irritant. | No data available. |
| Titanium dioxide | Human: Mild skin irritation (3 h) | Rabbit: No eye irritation | Will not occur. |
| Other ingredients | No data available. | No data available. | No data available. |

Carcinogenicity

| | | | |
|-------------------|---|--|--|
| Quartz | IARC: 2A - Group 2A: Probably carcinogenic to humans (Quartz) NTP: Known to be human carcinogen (Quartz) OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. | | |
| Pigment yellow 65 | No data available. Supplier's statement: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. | | |
| Titanium dioxide | Rat – Inhalation: Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. Rat – Intramuscular: Tumorigenic: Neoplastic by RTECS criteria. Blood: Lymphomas including Hodgkin's disease. Tumors at site or application. IARC: 2B - Group 2B: Possibly carcinogenic to humans (Titanium dioxide). | | |
| Other ingredients | Are or contain components that are not classifiable as to their carcinogenicity based on IARC, ACGIH, NTP, or EPA classification. | | |

Reproductive toxicity

No data available.

Teratogenicity

No data available.

Specific target organ toxicity - single exposure (Globally Harmonized System)

| | |
|-------------------|--------------------------|
| Methanol | Causes damage to organs. |
| Other ingredients | No data available. |

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available.

Aspiration hazard

No data available

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: Harmful if swallowed.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

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Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties of this product (a mixture) have not been thoroughly investigated.

Synergistic effects

No data available.

12. ECOLOGICAL DATA

Toxicity

| | |
|--------------------|--|
| Ammonium hydroxide | Fish: Oncorhynchus tshawytscha (Chinook salmon): 3.57 mg/dm ³ - 3 days (mortality NOEC) Daphnia and other aquatic invertebrates: Daphnia magna (water flea): 32 mg/dm ³ - 50 h (LC ₅₀) |
| Hydroxy ester | Fish: Other fish: 33 mg/dm ³ - 96 h (mortality NOEC) Daphnia and other aquatic invertebrates: Daphnid: 147.8 mg/dm ³ - 48 h (EC ₅₀) Algae: Algae: 15.0 mg/dm ³ - 96 h (EC ₅₀) |
| Methanol | Fish: Oncorhynchus mykiss (rainbow trout): 19,000 mg/dm ³ - 96 h (LC ₅₀) Cyprinus carpio (carp): 36,000 mg/dm ³ - 48 h (LC ₅₀) Pimephales promelas (fathead minnow): 1.8 mg/dm ³ - 144 h (mortality NOEC) Daphnia and other aquatic invertebrates: Daphnia magna (water flea): 10,000 mg/dm ³ - 24 h (EC ₁₀₀) Daphnia magna (water flea): 24,500 mg/dm ³ - 48 h (EC ₅₀) |
| Titanium dioxide | Fish: Other fish: >1,000 mg/dm ³ - 96 h (LC ₅₀) Daphnia and other aquatic invertebrates: Daphnia magna (water flea): 1,000 mg/dm ³ - 48 h (EC ₅₀) |
| Other ingredients | No data available. |

Persistence and degradability

| | |
|-----------------------|---|
| Hydroxy ester | >77 % (28 days, Ready Biodegradability: CO ₂ Evolution Test) Readily biodegradable |
| All other ingredients | No data available. |

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

PBT and vPvB assessment

No data available.

Biological oxygen demand

No data available.

Other adverse effects

Data for the entire preparation (a mixture) is not available.

13. DISPOSAL CONSIDERATIONS

Unused or spoiled product

This product may be a hazardous waste per 40 CFR 261 and other regulations. It is the responsibility of the user to determine whether the material meets the hazardous waste criteria and dispose according to the environmental laws. Do not dump into any drain, sewer, or on the ground. Contact a licensed professional waste disposal service to arrange for appropriate removal. Burn the material in a chemical incinerator equipped with an afterburner and scrubber. Do not incinerate closed containers.

Container

Empty packaging may contain product residue and should not be reused. Dispose as of unused product.

14. TRANSPORTATION INFORMATION

Not considered dangerous goods. Not regulated for transportation.

Information is provided for guidance purpose only, not meant to be inclusive. Packaging must be reviewed for suitability and compliance with the applicable regulations prior to shipment.

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15. REGULATORY INFORMATION**TSCA and DSL**

Listed or exempt.

OSHA Hazards

Irritant, harmful by ingestion.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard.

SARA 302 and 304

To the best of our knowledge, no chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302 (40 CFR 355.30) or Section 304 (40 CFR 355 and 40 CFR 302).

SARA 313

The following are subject to reporting levels established by SARA Title III, Section 313 (40 CFR 372.65):

Ammonium hydroxide (CAS 1336-21-6)

Methanol (CAS 67-56-1)

California Proposition 65

Warning! This product contains trace amount of a chemicals known to the State of California to cause cancer:

Quartz (CAS 14464-46-1)

To the best of our knowledge, this product does not contain chemicals known to the State of California to cause birth defects or other reproductive harm.

Volatile Organic Compounds

Below 100 g/l (calculated per 40 CFR 59.406).

16. ADDITIONAL INFORMATION

This safety data sheet complies with 29 CFR 1910.1200 and with EC 1907/2006, as amended.

Unlimited paper copies of this publication may be made by the users for internal purposes only.

Last modified: Tuesday, 23 February 2016 10:19 (Fully updated SDS.)

Disclaimer

All information and data appearing on this Safety Data Sheet are provided in good faith and are believed to be reliable and accurate to the best of our knowledge at the date of publication. Although certain hazards are listed herein, there is no guarantee that these are only risks. None of the provided information is to be considered a warranty or quality specification or all-inclusive and is given only as guidance. It is the user's responsibility to determine the safety of use, handling, storage, transportation, disposal, and suitability for the intended utilisation of the product. Unless otherwise specified, the data provided herein is valid only for the described material and may be not applicable for the product used in combination with any other materials or processes. Colorado Paint Company / Swarco shall not be liable for any damage resulting from handling, contact, use, or inability to use of this product. No guarantee, expressed or implied, is made by Colorado Paint Company / Swarco and the user assumes all risk and responsibility.