



Material Safety Data Sheet (MSDS)

Issue/Revision Date: 31 January 2012

Section 1. Product and Company Information

Chemical Name: Withheld as a trade secret (OSHA 29 CFR 1910.1200 [i] [1])
Synonym(s): None
Tradename: MethAlert Step 2 Developer
Catalog No.: Component of 560-001

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Section 2. Composition/Information on Ingredient(s)

Chemical Name	CAS #	Percent (Approx. by wt.)	OSHA PEL	ACGIH® TLV	Listed Carcinogen		Notes
					NTP	IARC	
Trade secret component 1	Not reported	2	No	No	No	No	Ingestion hazard Eye irritant Skin permeator
Trade secret component 2	Not reported	3	200 ppm 360 mg/m ³ Ceiling	25 ppm 45 mg/m ³ Ceiling	Suspect	2B (possible human)	NIOSH NDHL: 2000 ppm, Hazardous
Distilled water	7732-18-5	95	No	No	No	No	Expected to be non-hazardous

Important Note:

As required by U.S. OSHA regulations, hazard information supplied below is based on exposure to reagent-grade (full-strength) chemicals. SKC MethAlert Kits, however, contain dilute solutions of 2% and 3% by weight for trade secret components 1 and 2.

Section 3. Hazards Identification

Emergency Overview: Toxic
Toxic and harmful if swallowed
Flammable (USA)/Extremely flammable liquid and vapor (EU)
Irritating to respiratory system
Irritation and risk of serious damage to eyes
Suspected carcinogenic effect
May cause sensitization by skin contact
May be harmful if absorbed through the skin
California Proposition 65 carcinogen
May form explosive peroxides
Photosensitizer
Lachrymator
Harmful to aquatic life

Target Organs: Blood, kidney, lungs, and liver; cardiovascular system and central nervous system

HMIS Rating:	<u>Component 1</u>	<u>Component 2</u>
Health:	2*	2*
Flammability:	0	4
Physical Hazards:	0	2

* Additional chronic hazards present

NFPA Rating:	<u>Component 1</u>	<u>Component 2</u>
Health:	2	2
Flammability:	0	4
Reactivity:	0	0

Precautionary Statements

Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

Avoid breathing dust, fumes, gas, mist, vapors, and spray.

Wear protective gloves, eye protection, and face protection.

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

For additional information on toxicity, please refer to Section 11.

Section 4. First Aid Measures

General advise

Consult a physician. Show this safety sheet to the doctor in attendance. Move out of dangerous area.

Oral Exposure

Do NOT induce vomiting. If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing, give artificial respiration. Consult a physician.

Dermal Exposure

In case of skin contact, wash skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5. Fire Fighting Measures

Flammable Hazards

Flammable Hazards: Yes

Peroxide Former: Yes

Conditions of Flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

Explosion Hazards

May explode when heated. Closed containers may rupture and explode during runaway polymerization. Vapors may form explosive mixtures with air.

Flash Point: N/A

Ignition Temperature: N/A

Flammability: N/A

Extinguishing Media

Suitable: For small (incipient) fires, use media such as alcohol-resistant foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Fire Fighting

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Extremely flammable. Emits hazardous decomposition products (carbon oxides) under fire conditions. Vapor may travel considerable distance to source of ignition and flash back.

Specific Method(s) of Fire Fighting: Use water spray to cool unopened, fire-exposed containers.

Section 6. Accidental Release Measures

Personal Precautions

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and Materials for Containment and Cleaning Up

Contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. *See Section 13.*

Section 7. Handling and Storage

Handling

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, and on clothing. May explode when heated. Closed containers may rupture and explode during runaway polymerization. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Suitable: Keep container tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, and open flame. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Special Requirements

Store at ≤ 39.2 F (4 C) before and after opening. Pack in cooler with ice for field use. Do not store with food. Store under inert-gas. Air sensitive.

Comp. 2: 35-46.4 F (2-8 C)

Section 8. Exposure Controls/Personal Protective Equipment (PPE)

The identities of components 1 and 2 are withheld as a trade secret (OSHA 29 CFR 1910.1200 [i] [1]). Contains no substances with occupational exposure limit values.

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Use respirators and components tested and approved under appropriate government standards such as NIOSH (U.S.) or CEN (EU).

- | | |
|---------------------|---|
| Respiratory: | Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (U.S.) or type AXBAK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. |
| Hand: | Compatible chemical-resistant gloves. Use proper glove removal techniques to avoid skin contact with this product. Wash and dry hands. |
| Eye: | Tightly fitting chemical safety goggles. Faceshield (8-inch minimum). |

Skin and Body: Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

General Hygiene Measures

Remove and wash contaminated clothing promptly. Wash thoroughly after handling. Wash hands before breaks and at the end of the workday.

Components with Workplace Control Parameters

Component 2 of Trade Secret Ingredient	Value	Control Parameters	Basis
	C	25 ppm	U.S. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.		
	TWA	100 ppm 180 mg/m ³	U.S. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	STEL	150 ppm 270 mg/m ³	U.S. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	TWA	200 ppm 360 mg/m ³	U.S. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m ³ is approximate.			
Potential Occupational Carcinogen See Appendix C at www.cdc.gov/niosh/npg/nengapdx.html and Appendix A at www.cdc.gov/niosh/npg/nengapdx.html			

Exposure Limits, RTECS for Component 2 of Trade Secret Ingredient

Country	Source	Type	Value
U.S.	ACGIH	Ceiling	25 ppm
U.S.	MSHA Standard - air	TWA	100 ppm (180 mg/m ³)
U.S.	OSHA	PEL (8 h TWA)	200 ppm (360 mg/m ³)
New Zealand	OEL (Check ACGIH TLV)	---	---
U.S.	NIOSH	---	(18 ppm LOQ)

Exposure Limits for Component 2 of Trade Secret Ingredient

Country	Source	Type	Value
Poland	---	NDS	5 mg/m ³
Poland	---	NDSch	---
Poland	---	NDSP	45

Section 9. Physical/Chemical Properties

Appearance

Color: Light brown
Form: Liquid
Odor: Yes

Note: No further properties were reported by chemical supplier.

Section 10. Stability and Reactivity

Stability

- Stable:** Avoid exposure to air any longer than necessary so as to prevent peroxide formation. Stable under recommended storage conditions.
- Conditions to Avoid:** Exposure to air, moisture, heat, flames, sparks, and extremes of temperature and direct sunlight.
- Materials to Avoid:** Strong oxidizing agents, reducing agents, acids, nitric acid, peroxides, bases, sodium hydroxide, caustic soda, amines, ammonia, oxygen, chemical contamination

Hazardous Decomposition Products

Hazardous Decomposition Products:

Products: Hazardous decomposition products found under fire conditions: carbon monoxide, carbon dioxide, nitrogen oxides (NO_x), sodium/sodium oxides, hydrogen cyanide, iron oxides

Hazardous Polymerization:

Polymerization: Oxidized readily in air to form unstable peroxides that can lead to spontaneous explosion. May undergo autopolymerization. Uncontrolled polymerization can cause rapid evolution of heat and increased pressure which can result in violent rupture of storage vessels or containers.

Section 11. Toxicological Information

The identities of components 1 and 2 are withheld as a trade secret (OSHA 29 CFR 1910.1200 [i] [1]).

Route of Exposure

- Skin Contact:** May cause skin irritation
- Skin Absorption:** May be harmful if absorbed through the skin. Causes skin irritation
- Eye Contact:** Causes severe eye irritation. Lachrymator.
- Inhalation:** May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
- Ingestion:** Harmful if swallowed

Sensitization

- Sensitization:** Photosensitizer
- Skin:** May cause allergic skin reaction

Specific Target Organ Toxicity - Single Exposure (GHS)

May cause respiratory irritation

Specific Target Organ Toxicity - Repeated Exposure (GHS)

No data available

Signs and Symptoms of Exposure

Exposure can cause pulmonary edema. Effects may be delayed. Nausea, vomiting, unconsciousness, blurred vision, headache, and may cause cyanosis (blue-gray coloring of skin and lips caused by lack of oxygen). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Toxicity Data

Acute Toxicity

Component 1 of Trade Secret Ingredient

- Oral:** Rat, 99 mg/kg, referred to anhydrous form, LD50
- Intraperitoneal:** Rat, 7 mg/kg, LD50
- Intravenous:** Rat, 9300 µg/kg, LD50
- Intraperitoneal:** Mouse, 9 mg/kg, LD50
- Intravenous:** Mouse, 6 mg/kg, LD50
- Intravenous:** Rabbit, 1800 µg/kg, LD50

Skin Corrosion/Irritation

No data available

Serious Eye Damage/Eye Irritation

No data available

Respiratory or Skin Sensitization

No data available

Germ Cell Mutagenicity

No data available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or possible carcinogen by ACGIH.
NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or possible carcinogen by OSHA.

Reproductive Toxicity

No data available

Specific Target Organ Toxicity - Single Exposure (GHS)

No data available

Specific Target Organ Toxicity - Repeated Exposure (GHS)

No data available

Aspiration Hazard

No data available

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: Toxic if swallowed.
Skin: May be harmful if absorbed through the skin. May cause skin irritation.
Eyes: May cause eye irritation.

Signs and Symptoms of Exposure

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

Additional Information

RTECS: LJ8925000

Acute Toxicity

Component 2 of Trade Secret Ingredient

Oral: Rat, 661 mg/kg, LD50

Remarks

Lungs, Thorax, or Respiration: Dyspnea
Peripheral Nerve and Sensation: Spastic paralysis with or without sensory change
Behavioral: Altered sleep time (including change in righting reflex)

Inhalation: Rat, 4 h, 13,300 ppm, LC50

Remarks

Lungs, Thorax, or Respiration: Dyspnea
Behavioral: Excitement

Dermal: Rabbit, 3,540 mg/kg, LD50

Other Information on Acute Toxicity

No data available

Skin Corrosion/Irritation

Skin - rabbit - Mild skin irritation

Serious Eye Damage/Eye Irritation

Eyes - rabbit - Severe eye irritation

Respiratory or Skin Sensitization

May cause allergic skin reaction.

Photosensitizer.

Germ Cell Mutagenicity

Laboratory experiments have shown mutagenic effects.

Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Acetaldehyde)
1 - Group 1: Carcinogenic to humans (Acetaldehyde)
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Acetaldehyde)
1 - Group 1: Carcinogenic to humans (Acetaldehyde)
NTP: Reasonably anticipated to be a human carcinogen (Acetaldehyde)
OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity

No data available

Teratogenicity

No data available

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System)

May cause respiratory irritation.

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. Causes respiratory tract irritation.
Ingestion: Harmful if swallowed.
Skin: Harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.

Signs and Symptoms of Exposure

Blurred vision, Unconsciousness

Synergistic Effects

No data available

Additional Information

RTECS: AB1925000

Distilled Water Data

RTECS#: See actual entry in RTECS for complete information.

CAS#: 7732-18-5: ZC0110000

LD50/LC50: CAS# 7732-18-5: Oral, rat: LD50 = > 90 mL/kg

Carcinogenicity: CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, CA Prop 65. None known

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies: None reported

Sensitization: No information available

Developmental Effects: No information available

Irritation: No information available

Toxicologically Synergistic Products: No information available

Endocrine Disrupter Information: No information available

Section 12. Ecological Information

The identities of components 1 and 2 are withheld as a trade secret (OSHA 29 CFR 1910.1200 [i] [1]).

Persistence and Degradability

No data available

Bioaccumulative Potential

No data available

Mobility in Soil

No data available

PBT and vPvB Assessment

No data available

Other Adverse Effects

No data available

Component 1 Ecological Information

No data available

Acute Ecotoxicity Tests

Component 2 of Trade Secret Ingredient

Test Type:	LC50 Fish
Species:	Pimephales promelas (fathead minnow)
Time:	96 h
Value:	31 mg/l
Test Type:	EC50 Daphnia
Species:	Daphnia magna and other aquatic invertebrates
Time:	48 h
Value:	48 mg/l
Test Type:	LC100
Species:	Leuciscus idus (Golden orfe)
Time:	48 h
Value:	124-156 mg/l

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13. Disposal Considerations

Burn in a chemical incinerator equipped with an afterburner and scrubber, but exert extra care in igniting as this material is highly flammable.

Any unused material should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with federal, state, and local regulations.

Section 14. Transport Information

The identities of components 1 and 2 are withheld as a trade secret (OSHA 29 CFR 1910.1200 [i] [1]).

		Comp. 1	Comp. 2	Distilled Water
U.S. DOT	Class	6.1	3	XCP
	Packing Group	III	I	Not regulated
	Hazard Label	Toxic substance	Flammable liquid	Not regulated
	PIH	Not PIH	Not PIH	Not regulated
	Marine Pollutant	No	No	Not regulated
IATA	Hazard Class	6.1	3	Not regulated
	Packing Group	III	I	Not regulated
	Hazard Label	Toxic substance	Flammable liquid Not Allowed - Aircraft: Cargo aircraft only. Not permitted on passenger aircraft	Not regulated
Canada TDG	Shipping Name	Not reported	Not reported	Not regulated
	Hazard Class	Not reported	Not reported	Not regulated
	UN Number	Not reported	Not reported	Not regulated
	Packing Group	Not reported	Not reported	Not regulated
IMDG/IMO				Not regulated
IMDG	Class	6.1	3	
	Packing Group	III	I	
	Hazard Label	Toxic substance	Flammable liquid	
	Marine Pollutant	No	No	

Section 15. Regulatory Information

The identities of components 1 and 2 are withheld as a trade secret (OSHA 29 CFR 1910.1200 [i] [1]).

Component 1 of Trade Secret Ingredient

OSHA Hazards:	Flammable liquid, Carcinogen, Target Organ Effect, Harmful by ingestion, Skin sensitizer, Irritant
SARA 302 Components:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components:	A component is subject to reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards:	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
MA Right to Know Comp.:	Not listed
PA Right to Know Comp.:	Not listed
NJ Right to Know Comp.:	Not listed
CA Prop. 65 Comp.:	WARNING! This product contains a chemical known to the state of California to cause cancer.

Component 2 of Trade Secret Ingredient

OSHA Hazards:	Target Organ Effect, Toxic by ingestion
DSL Status:	All components of this product are on the Canadian DSL list.
SARA 302 Components:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components:	SARA 313: This material does not contain any chemical component with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards:	Acute Health Hazard, Chronic Health Hazard
MA Right to Know Comp.:	No components are subject to the Massachusetts Right to Know Act.
PA Right to Know Comp.:	Not listed
NJ Right to Know Comp.:	Not listed
CA Prop. 65 Comp.:	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

Disclaimer

For approved uses only. Not for drug, household, or other uses.

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SKC Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.