

MATERIAL SAFETY DATA SHEET

True Color™ Orange Antifreeze/Coolant Dye

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: D92013 Orange 1835

CAS Number: Blend

Company Identification

True Color™ Orange Dye

by Toxguard Fluid Technologies

11942 Western Ave

Stanton, CA 90680

714-698-3400 (for questions)

Chemtrec, 800-424-9300 (for emergencies)

True Color System, Patent Pending

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT LISTING:

Chemical Name	Amount	CAS Number
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Confidential Ingredient	> 1.0 %	Trade Secret
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DIETHYLENE GLYCOL	> 1.0 %	111-46-6
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NEOPENTYL GLYCOL	> 1.0 %	126-30-7
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(See Section 8 for exposure guidelines)

(See Section 15 for regulatory information)

HAZARDS DISCLOSURE

This product contains hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR

1910.1200.

As defined under Sara 311 and 312, this product contains materials that are acute, chronic hazards.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

This product contains Diethylene Glycol which may be fatal or cause serious health effects if swallowed.

Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of

material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

Neopentyl Glycol may

lead to serious damage to the eyes.

HMIS Rating:

Health - 3

Flammability - 1

Reactivity - 0

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Personal Protection Index - B

NFPA Rating:

Health - 1

Flammability - 1

Reactivity - 0

POTENTIAL HEALTH EFFECTS

EYE:

Contact may cause serious eye damage.

SKIN:

DIETHYLENE GLYCOL: Prolonged or repeated exposure not likely to cause significant skin irritation. A single, prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

INHALATION:

Avoid breathing vapors or mists. Not expected to be a problem under normal use. Higher temperatures may generate vapor levels sufficient to cause adverse effects.

INGESTION:

DIETHYLENE GLYCOL: Oral toxicity is moderate in humans, even though tests with animals show a much lower level of toxicity. THE LETHAL DOSE IN HUMANS IS APPROXIMATELY 2 OUNCES, (65ml).

Swallowing may also result in chronic health effects. May cause nausea and/or vomiting.

Excessive exposure may cause central nervous system effects; cardiopulmonary effects, such as metabolic acidosis; and kidney failure.

CARCINOGENICITY INFORMATION:

DIETHYLENE GLYCOL: Based on data from long-term animal studies, diethylene glycol is not believed to pose a carcinogenic risk to man.

REPRODUCTIVE HAZARDS:

DIETHYLENE GLYCOL: Exposure to diethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother. Diethylene glycol has not interfered with reproduction in animal studies except at very high doses.

TARGET ORGAN:

Diethylene glycol: Repeated, internal exposures may cause severe kidney, liver, and gastrointestinal effects.

Signs and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Observation in animals include formation of bladder stones after repeated oral doses of diethylene glycol. Reports of kidney failure and death in burn patients suggest that

diethylene glycol may have been a factor.

Neopentyl Glycol: Avoid contact with the eyes, there is a risk of serious eye damage.

4. FIRST AID MEASURES

EYE CONTACT FIRST AID:

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

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SKIN CONTACT FIRST AID:

Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Get

medical attention if irritation develops or persists. Discard all contaminated articles, including shoes, belts, and other articles made of leather.

INHALATION FIRST AID:

Although this product is not known to cause respiratory problems, if breathing is difficult, remove to fresh air and provide oxygen. Get medical attention.

INGESTION FIRST AID:

Do not induce vomiting. Keep affected person warm and treat for shock.

DIETHYLENE GLYCOL: GET IMMEDIATE MEDICAL ATTENTION OR CONTACT A POISON

CONTROL CENTER. If several ounces of this material is inadvertently swallowed and medical advice is delayed, immediately give 3 - 4 ounces of hard liquor to the victim to drink. Reduce the amount proportionally, based on body weight.

MISCELLANEOUS:

DIETHYLENE GLYCOL: Poisoning may initially produce behavior changes, drowsiness, vomiting, diarrhea, thirst, and convulsions.

NOTES TO PHYSICIAN:

DIETHYLENE GLYCOL: Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol.

Consider the use of ethanol and hemodialysis when significant quantities have been consumed. Consult standard literature for details.

4-Methyl pyrazole is an effective blocker of alcohol dehydrogenase and should be used in the treatment of diethylene intoxication, if available.

Signs and symptoms of diethylene glycol poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary

edema, may be delayed. Persons receiving significant exposure should be monitored for 24 - 48 hours for signs of

respiratory distress.

If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

TCC Flash Point: 154.0 C (309.2 F)

Autoignition Temperature: N/A

FLAMMABLE LIMITS IN AIR

LEL: 2 %

UEL: 12.3 %

EXTINGUISHING MEDIA:

Water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available.

General purpose synthetic

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RTN Number: 00001595

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foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide and dry

chemical. Do not use direct water stream, as it may spread the fire.

FIRE & EXPLOSION HAZARDS:

Can burn in fire, releasing toxic vapors. Heating above 270 F decomposes to Biuret, Ammonia and Nitrogen

Oxides. Short-term exposure to smoke and gases may lead to irreversible lung injury, without early signs and

symptoms. Diethylene glycol will ignite in air at 435 F. Hazardous combustion products may include and are not

limited to carbon monoxide, carbon dioxide, and trace amounts of aldehydes and organic acids.

FIRE FIGHTING INSTRUCTIONS:

Diethylene glycol or solutions of diethylene glycol and water can form flammable vapors with air if heated

sufficiently. Evacuate non-emergency personnel to a safe area. Isolate area and deny unnecessary entry. Wear

full protective clothing and positive pressure breathing apparatus. Prevent run off to sewers and bodies of water

from firefighting involving this product as product contains Clean Water Act Priority Pollutants.

Irritating toxic substances may be emitted upon thermal decomposition. Exposed firefighters should wear NIOSH

approved self contained breathing apparatus with full face piece and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

SAFEGUARDS (PERSONNEL):

Evacuate non-emergency personnel to a safe area. Protect skin and eyes from exposure.

PVC-coated rubber

gloves and monogoggles or faceshield can be used during cleanup of spill site.

INITIAL CONTAINMENT:

Contain spilled material. Take up and place in secure closed containers. Do not allow material to enter soil or surface water. Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

LARGE SPILLS PROCEDURE:

Large spillage should be dammed-off and pumped into containers. Take up the remainder by absorbent material.

Treat or dispose of waste material in accordance with all local state, provincial, and national requirements. Prevent

spilled product from entering streams or drinking water supply.

SMALL SPILLS PROCEDURE:

Clean up area by absorbent material. Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements.

7. HANDLING AND STORAGE

RECOMMENDED STORAGE TEMPERATURE

Minimum: 4.4 C (39.9 F)

Maximum: 51.7 C (125.1 F)

HANDLING (PERSONNEL):

Avoid breathing spray mists if generated. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

HANDLING (PHYSICAL ASPECTS):

Agitate containers before use. Product on surfaces can cause slippery conditions.

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STORAGE PRECAUTIONS:

Avoid extreme temperatures. Keep container closed when not in use. Keep away from food and drinking water.

SPECIAL SENSITIVITY:

KEEP FROM FREEZING. MUST MIX WELL BEFORE EACH USE.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

EYE / FACE PROTECTION REQUIREMENTS:

Chemical goggles are recommended to avoid contact with eyes.

SKIN PROTECTION REQUIREMENTS:

Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation. Use protective clothing impervious to this material. Wash hands thoroughly after handling. If hands are cut or scratched, use gloves impervious to this material even for brief exposures. When handling hot material, protect skin from thermal

burns as well as from skin absorption.

RESPIRATORY PROTECTION REQUIREMENTS:

If vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator or an air-supplied respirator as appropriate. Atmospheric levels should be maintained below the exposure guideline.

MISCELLANEOUS:

Use good personal hygiene practices; limit exposure to product whenever possible to minimize clean-up.

EXPOSURE GUIDELINES:

Confidential Ingredient A

OSHA PEL: 5 mg/m³

OSHA TWA: 10 mg/m³

MISCELLANEOUS:

DIETHYLENE GLYCOL: American Industrial Hygiene Association (AIHA) Workplace Exposure Level

Environmental, (WEEL) is 50 ppm, total; 10 mg/m³.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Liquid

COLOR: Dark Orange

ODOR: Faint Odor

BOILING POINT: 100 C

SOLUBILITY IN WATER: Complete

SPECIFIC GRAVITY: approx. 0.98 (Water = 1)

MELTING/FREEZING POINT: < 0 C

10. STABILITY AND REACTIVITY

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STABILITY:

This compound is stable at ambient conditions. Diethylene Glycol will ignite in air at 435 F (224 C).

POLYMERIZATION:

Hazardous polymerization will not occur.

INCOMPATIBILITY WITH OTHER MATERIALS:

Avoid contact with strong oxidizers, acids or bases. Avoid contact with Nitrates. May react with Hypochlorites to produce explosive Nitrogen Trichloride.

DECOMPOSITION:

Decomposition may produce ammonia, biuret, oxides of carbon, nitrogen and sulphur.

Hazardous combustion

products may include and are not limited to: carbon monoxide, carbon dioxide, trace amounts of aldehydes,

alcohols, ethers and organic acids.

11. TOXICOLOGICAL INFORMATION

Confidential Ingredient A

Test Code: LDLO

Species: Domestic Animal

Results: May cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea. A single dose of 100 grams has reportedly caused mild symptoms of central nervous system depression e.g. drowsiness and slow reflexes.

Test Code: Skin Irritation

Results: Repeated or prolonged contact may cause reddening, itching and inflammation.

Results: In an NCI sponsored lifetime feeding study, this ingredient caused an increase in the incidence of

cancers (malignant lymphomas) in female mice: however, because this effect was not dose related, its

biological significance was questioned by the investigators. Other effects in male rats were also of

questionable significance.

Test Code: Developmental Toxicity/Teratogenicity

Species: Rats & Mice

Results: No external teratogenicity; mean birthweight lower, but larger litter size at 50 g/kg/d in rats and

mice.

Test Code: Acute Oral Toxicity

Species: Cattle

Results: LD50: 510 mg/kg

DIETHYLENE GLYCOL

Test Code: Teratology (Birth Defects)

Description:

Results: Birth defects are unlikely from exposure to diethylene glycol. Exposures having no adverse

effects on the mother should have no effect on the fetus.

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Test Code: Oral LD50

Species: Rat

Results: 20,750 mg/kg.

Test Code: Skin Irritation

Results: Prolonged or repeated exposure not likely to cause significant skin irritation.

Test Code: Human Studies

Results: Lethal dose approximately 2 ounces, (65 ml)

NEOPENTYL GLYCOL

Test Code: LD50 Acute Oral Toxicity

Species: Rat

Results: > 5000 mg/kg

Test Code: Primary Eye Irritation

Species: Rabbit

Results: severe irritant

12. ECOLOGICAL INFORMATION

DIETHYLENE GLYCOL

Test Code: EC50

Species: Daphnia Magna

Results: 49000 mg/liter

Test Code: EC50

Species: Mussel

Results: 331 mg/liter

Test Code: LC50

Species: Rainbow Trout (*Oncorhynchus mykiss*)

Results: > 1000 mg/liter

Test Code: LC50

Species: Goldfish (*Carassius auratus*)

Results: > 5000 mg/liter

NEOPENTYL GLYCOL

Test Code: LC50

Description: 48 hour test

Species: *Leucidus Idus*

Results: > 500 mg/l

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Uncleaned empty containers should be disposed of in the same manner as the contents. Treat or dispose of waste

material in accordance with all local, state/provincial, and national requirements.

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14. TRANSPORTATION INFORMATION

PRODUCT LABEL: D92013 Orange 1835

D.O.T. SHIPPING NAME: Not Regulated

D.O.T. HAZARD CLASS: Non-Hazardous

15. REGULATORY INFORMATION

MISCELLANEOUS INFORMATION:

This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA).

This material or all of its components are listed on the Canadian Domestic Substances List (DSL).

This material or all of its components are listed (or considered as having been notified) on the European Inventory of Existing Chemical Substances (EINECS).

This material or all of its components are listed on the Chinese Inventory.

This material or all of its components are listed on the Australian Inventory of Chemical Substances, AICS.

This material or all of its components are listed on the Japanese Existing and New Chemical Substances ENCS.

This material or all of its components are listed on the Korean Existing and Evaluated Chemical Substances ECL.

CALIFORNIA PROPOSITION 65: This material contains chemicals known to the State of California to cause

cancer: 1,4 Dioxane, CAS # 123-91-1, < 0.01 ppm.

CALIFORNIA PROPOSITION 65: This material contains chemicals known to the State of California to cause birth defects or other reproductive harm: Ethylene Glycol monomethyl ether, CAS # 109-86-4, < 0.001 ppm.

Massachusetts Substance List
DIETHYLENE GLYCOL (111-46-6)

NJ Right to Know List
DIETHYLENE GLYCOL (111-46-6)

PA Hazardous Substance List
DIETHYLENE GLYCOL (111-46-6)

ADDITIONAL INFORMATION:

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The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process.

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Toxguard Fluid Technologies, Inc. The data on this sheet are related only to the specific material designated herein. Toxguard Fluid Technologies, Inc. assumes no legal responsibility for use or reliance upon these data.

END OF MSDS

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