

# Material Safety Data Sheet

## DAR

### 1 . Product and company identification

<b>Common name</b>	: DAR
<b>Material uses</b>	: Not available.
<b>Supplier/Manufacturer</b>	: San Leandro Color 555 Est 14 th Street San Leandro, CA USA, 94577
<b>In case of emergency</b>	: CHEMTREC, U.S. : (800) 424-9300 International: (703) 527-3887
<b>MSDS authored by:</b>	: Kemika XXI Inc. + 1-450-435-7475 11/15/2006

### 2 . Hazards identification

<b>Physical state</b>	: Liquid. (Aerosol.)
<b>Odor</b>	: Solvent.
<b>Hazard status</b>	: This material is classified hazardous under OSHA regulations in the United States, the WHMIS Controlled Product Regulation in Canada and the NOM-018-STPS-2000 in Mexico.
<b>Emergency overview</b>	: WARNING ! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FIRE. CONTENTS UNDER PRESSURE. CANCER HAZARD. CONTAINS MATERIAL WHICH CAN CAUSE CANCER. BIRTH DEFECT HAZARD. CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT. HARMFUL IF INHALED OR SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, LUNGS, LIVER, PERIPHERAL NERVOUS SYSTEM, GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA, NOSE, SINUSES, THROAT. Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure. Avoid exposure during pregnancy.
<b>Routes of entry</b>	: Dermal contact. Eye contact. Inhalation.
<b>Potential acute health effects</b>	
<b>Eyes</b>	: Irritating to eyes.
<b>Skin</b>	: Irritating to skin. May cause sensitization by skin contact. May be harmful if absorbed through skin.
<b>Inhalation</b>	: Harmful by inhalation. Irritating to respiratory system.
<b>Ingestion</b>	: Harmful if swallowed.
<b>Potential chronic health effects</b>	: Carcinogenic effects Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Toluene]. Classified 2B (Possible for humans.) by IARC [Titanium dioxide]. Classified None. by NIOSH [Titanium dioxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Titanium dioxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Xylene]. Classified A3 (Proven for animals.) by ACGIH, 2B (Possible for humans.) by IARC [Ethylbenzene]. Classified None. by NIOSH [Ethylbenzene]. Classified + (Proven.) by NIOSH [Carbon Black]. Classified 2B (Possible for humans.) by IARC [Carbon Black].

Classified A4 (Not classifiable for humans or animals.) by ACGIH [Carbon Black].

Mutagenic effects Not available.

Teratogenic effects: Not available.

**Medical conditions  
aggravated by over-  
exposure**

- : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organ damage.

See toxicological information (section 11)

### 3. Composition/information on ingredients

#### United States

Name	CAS number	%
Difluoroethane	75-37-6	30 - 60
Toluene	108-88-3	10 - 30
Titanium dioxide	13463-67-7	10 - 30
Xylene	1330-20-7	10 - 30
Heptan-2-one	110-43-0	1 - 5
Ethylbenzene	100-41-4	1 - 5
Carbon Black	1333-86-4	1 - 5
Methyl ethyl ketone	78-93-3	1 - 5
Stoddard Solvent	8052-41-3	1 - 5
Solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 5

#### Canada

Name	CAS number	%
Difluoroethane	75-37-6	30 - 60
Toluene	108-88-3	10 - 30
Titanium dioxide	13463-67-7	10 - 30
Xylene	1330-20-7	10 - 30
Heptan-2-one	110-43-0	1 - 5
Ethylbenzene	100-41-4	1 - 5
Carbon Black	1333-86-4	1 - 5
Methyl ethyl ketone	78-93-3	1 - 5
Stoddard Solvent	8052-41-3	1 - 5
Solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 5

#### Mexico

Name	UN number	IDLH	Classification				CAS number	%
			H	F	R	Special		
Difluoroethane	UN1030	-	1	4	0		75-37-6	30 - 60
Toluene	UN1294	500 ppm	2	3	0		108-88-3	10 - 30
Xylene	UN1307	900 ppm	2	3	0		1330-20-7	10 - 30
Titanium dioxide	Not regulated.	5000 mg/m <sup>3</sup>	0	0	0		13463-67-7	10 - 30
Heptan-2-one	UN1110	800 ppm	1	2	0		110-43-0	1 - 5
Ethylbenzene	UN1175	800 ppm	2	3	0		100-41-4	1 - 5
Carbon Black	Not regulated.	1750 mg/m <sup>3</sup>	2	0	0		1333-86-4	1 - 5
Methyl ethyl ketone	UN1193	3000 ppm	1	3	0		78-93-3	1 - 5
Stoddard Solvent	UN1268	20000 mg/m <sup>3</sup>	1	2	0		8052-41-3	1 - 5

## 4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention immediately.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Notes to physician** : No specific antidote. Medical staff must contact Poison Control Center.

## 5 . Fire-fighting measures

- Flammability of the product** : Flammable.
- Products of combustion** : These products are carbon oxides, halogenated compounds, hydrogen fluoride. Some metallic oxides.
- Extinguishing media**
- Suitable** : Use dry chemical, carbon dioxide, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Flammable liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

## 7 . Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
- Storage** : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

## 8 . Exposure controls/personal protection

### United States

#### Product name

Difluoroethane

#### Exposure limits

**AIHA WEEL (United States, 1/2004).**

TWA: 1000 ppm 8 hour(s). Form: All forms

**ACGIH TLV (United States, 1/2005). Skin**

TWA: 188 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

TWA: 50 ppm 8 hour(s). Form: All forms.

**NIOSH REL (United States, 12/2001).**

STEL: 560 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

STEL: 150 ppm 15 minute(s). Form: All forms.

TWA: 375 mg/m<sup>3</sup> 10 hour(s). Form: All forms.

TWA: 100 ppm 10 hour(s). Form: All forms.

**OSHA PEL Z2 (United States, 8/1997).**

AMP: 500 ppm 10 minute(s). Form: All forms.

TWA: 200 ppm 8 hour(s). Form: All forms.

**ACGIH TLV (United States, 1/2005).**

TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

**OSHA PEL (United States, 8/1997).**

TWA: 15 mg/m<sup>3</sup> 8 hour(s). Form: Total dust

Toluene

Titanium dioxide

Xylene

**ACGIH TLV (United States, 1/2005).**

STEL: 651 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

STEL: 150 ppm 15 minute(s). Form: All forms.

TWA: 434 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

TWA: 100 ppm 8 hour(s). Form: All forms.

**OSHA PEL (United States, 8/1997).**

TWA: 435 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

TWA: 100 ppm 8 hour(s). Form: All forms.

Heptan-2-one

**NIOSH REL (United States, 12/2001).**

TWA: 465 mg/m<sup>3</sup> 10 hour(s). Form: All forms.

TWA: 100 ppm 10 hour(s). Form: All forms.

**OSHA PEL (United States, 8/1997).**

TWA: 465 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

TWA: 100 ppm 8 hour(s). Form: All forms.

**ACGIH TLV (United States, 1/2005).**

TWA: 233 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

TWA: 50 ppm 8 hour(s). Form: All forms.

Ethylbenzene

**ACGIH TLV (United States, 1/2005).**

STEL: 125 ppm 15 minute(s). Form: All forms.

TWA: 100 ppm 8 hour(s). Form: All forms.

**NIOSH REL (United States, 12/2001).**

STEL: 545 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

STEL: 125 ppm 15 minute(s). Form: All forms.

TWA: 435 mg/m<sup>3</sup> 10 hour(s). Form: All forms.

TWA: 100 ppm 10 hour(s). Form: All forms.

**OSHA PEL (United States, 8/1997).**

TWA: 435 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

TWA: 100 ppm 8 hour(s). Form: All forms.

Carbon Black

**ACGIH TLV (United States, 1/2005).**

TWA: 3.5 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

**NIOSH REL (United States, 12/2001).**

TWA: 3.5 mg/m<sup>3</sup> 10 hour(s). Form: All forms.

**OSHA PEL (United States, 8/1997).**

TWA: 3.5 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

Methyl ethyl ketone

**ACGIH TLV (United States, 1/2005).**

STEL: 885 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

STEL: 300 ppm 15 minute(s). Form: All forms.

TWA: 590 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

	<p>TWA: 200 ppm 8 hour(s). Form: All forms.  <b>NIOSH REL (United States, 12/2001).</b>          STEL: 885 mg/m<sup>3</sup> 15 minute(s). Form: All forms.          STEL: 300 ppm 15 minute(s). Form: All forms.          TWA: 590 mg/m<sup>3</sup> 10 hour(s). Form: All forms.          TWA: 200 ppm 10 hour(s). Form: All forms.  <b>OSHA PEL (United States, 8/1997).</b>          TWA: 590 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 200 ppm 8 hour(s). Form: All forms.  <b>ACGIH TLV (United States, 1/2005).</b>          TWA: 525 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 100 ppm 8 hour(s). Form: All forms.  <b>NIOSH REL (United States, 12/2001).</b>          CEIL: 1800 mg/m<sup>3</sup> 15 minute(s). Form: All forms.          TWA: 350 mg/m<sup>3</sup> 10 hour(s). Form: All forms.  <b>OSHA PEL (United States, 8/1997).</b>          TWA: 2900 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 500 ppm 8 hour(s). Form: All forms.  <b>Manufacturer (United States).</b>          TWA: 40 ppm 8 hour(s). Form: All forms.</p>
Stoddard Solvent	
Solvent naphtha (petroleum), light aromatic	

## Canada

### Product name

### Exposure limits

Toluene	<p><b>ACGIH TLV (United States, 1/2005). Skin</b>          TWA: 188 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 50 ppm 8 hour(s). Form: All forms.</p>
Titanium dioxide	<p><b>ACGIH TLV (United States, 1/2005).</b>          TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: All forms.</p>
Xylene	<p><b>ACGIH TLV (United States, 1/2005).</b>          STEL: 651 mg/m<sup>3</sup> 15 minute(s). Form: All forms.          STEL: 150 ppm 15 minute(s). Form: All forms.          TWA: 434 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 100 ppm 8 hour(s). Form: All forms.</p>
Heptan-2-one	<p><b>ACGIH TLV (United States, 1/2005).</b>          TWA: 233 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 50 ppm 8 hour(s). Form: All forms.</p>
Ethylbenzene	<p><b>ACGIH TLV (United States, 1/2005).</b>          STEL: 125 ppm 15 minute(s). Form: All forms.          TWA: 100 ppm 8 hour(s). Form: All forms.</p>
Carbon Black	<p><b>ACGIH TLV (United States, 1/2005).</b>          TWA: 3.5 mg/m<sup>3</sup> 8 hour(s). Form: All forms.</p>
Methyl ethyl ketone	<p><b>ACGIH TLV (United States, 1/2005).</b>          STEL: 885 mg/m<sup>3</sup> 15 minute(s). Form: All forms.          STEL: 300 ppm 15 minute(s). Form: All forms.          TWA: 590 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 200 ppm 8 hour(s). Form: All forms.</p>
Stoddard Solvent	<p><b>ACGIH TLV (United States, 1/2005).</b>          TWA: 525 mg/m<sup>3</sup> 8 hour(s). Form: All forms.          TWA: 100 ppm 8 hour(s). Form: All forms.</p>
Solvent naphtha (petroleum), light aromatic	<p><b>Manufacturer (Canada).</b>          TWA: 40 ppm 8 hour(s).</p>

## Mexico

### Product name

Toluene

### Exposure limits

**NOM-010-STPS (Mexico, 9/2000). Skin**

CPT: 188 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

CPT: 50 ppm 8 hour(s). Form: All forms.

Titanium dioxide

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 20 mg/m<sup>3</sup> 15 minute(s). Form: All forms.CPT: 10 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

Xylene

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 655 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

CCT: 150 ppm 15 minute(s). Form: All forms.

CPT: 435 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

CPT: 100 ppm 8 hour(s). Form: All forms.

Heptan-2-one

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 465 mg/m<sup>3</sup> 15 minute(s). Form: All forms

CCT: 100 ppm 15 minute(s). Form: All forms

CPT: 235 mg/m<sup>3</sup> 8 hour(s). Form: All forms

CPT: 50 ppm 8 hour(s). Form: All forms

Ethylbenzene

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 545 mg/m<sup>3</sup> 15 minute(s). Form: All forms

CCT: 125 ppm 15 minute(s). Form: All forms

CPT: 435 mg/m<sup>3</sup> 8 hour(s). Form: All forms

CPT: 100 ppm 8 hour(s). Form: All forms

Carbon Black

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 7 mg/m<sup>3</sup> 15 minute(s). Form: SmokeCPT: 3.5 mg/m<sup>3</sup> 8 hour(s). Form: Smoke

Methyl ethyl ketone

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 885 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

CCT: 300 ppm 15 minute(s). Form: All forms.

CPT: 590 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

CPT: 200 ppm 8 hour(s). Form: All forms.

Stoddard Solvent

**NOM-010-STPS (Mexico, 9/2000).**

CCT: 1050 mg/m<sup>3</sup> 15 minute(s). Form: All forms.

CCT: 200 ppm 15 minute(s). Form: All forms.

CPT: 523 mg/m<sup>3</sup> 8 hour(s). Form: All forms.

CPT: 100 ppm 8 hour(s). Form: All forms.

### Engineering measures

- : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Personal protection

#### Eyes

- : Splash goggles.

#### Skin

- : Synthetic apron.

#### Respiratory

- : Vapor respirator.

#### Hands

- : Nitrile gloves.



### HMIS Code/Personal protective equipment

: J

### Personal protection in case of a large spill

- : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.

## 9 . Physical and chemical properties

**Physical state** : Liquid. (Aerosol.)  
**Flash point** : Closed cup: 10°C (50°F).(Pensky-Martens.)  
**Auto-ignition temperature** : The lowest known value is 232.22°C (450°F) (Stoddard Solvent).  
**Flammable limits** : Lower: 1.2%  
**Odor** : Solvent.  
**Boiling/condensation point** : 77.8 to 203.9°C (172 to 399°F)  
**Melting/freezing point** : Weighted average: -64.57°C (-84.2°F)  
**Critical temperature** : The lowest known value is 262.6°C (504.7°F) (Methyl ethyl ketone).  
**Relative density** : 1.062 (Water = 1)  
**Vapor pressure** : 0.9 kPa (7.1 mm Hg) (at 20°C)  
**Vapor density** : >1 (Air = 1)  
**Volatility** : 54 to 63% (v/v)  
**Odor threshold** : Weighted average: 3.54 ppm  
**Evaporation rate** : 78  
**VOC** : 59 (%)  
**Solubility** : Partially soluble in diethyl ether.  
 Insoluble in cold water, hot water.

## 10 . Stability and reactivity

**Stability and reactivity** : The product is stable.  
**Incompatibility with various substances** : Reactive with oxidizing materials, acids and alkalis.  
**Hazardous decomposition products** : These products are halogenated compounds, hydrogen fluoride.  
**Hazardous polymerization** : Will not occur.  
**Conditions of reactivity** : Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.  
 Highly flammable in the presence of the following materials or conditions: heat.  
 Flammable in the presence of the following materials or conditions: shocks and mechanical impacts.

## 11 . Toxicological information

### Toxicity data

Product/ingredient name	Test	Result	Route	Species
Toluene	LD50	636 mg/kg	Oral	Rat
	LD50	1221 mg/kg	Dermal	Rabbit
Xylene	LD50	4300 mg/kg	Oral	Rat
	LD50	2119 mg/kg	Oral	Mouse
	LD50	>1700 mg/kg	Dermal	Rabbit
	LC50	6350 ppm (4 hour(s))	Inhalation	Rat
Heptan-2-one	LD50	1670 mg/kg	Oral	Rat
	LD50	730 mg/kg	Oral	Mouse
	LD50	10220 mg/kg	Dermal	Rabbit
	LC50	>2000 ppm (4 hour(s))	Inhalation	Rat
	LC50	<4000 ppm (4 hour(s))	Inhalation	Rat
	LD50	3500 mg/kg	Oral	Rat
Carbon Black	LD50	>15400 mg/kg	Oral	Rat

Methyl ethyl ketone	LD50	2737 mg/kg	Oral	Rat
	LD50	4050 mg/kg	Oral	Mouse
	LD50	6480 mg/kg	Dermal	Rabbit
Solvent naphtha (petroleum), light aromatic	LD50	8400 mg/kg	Oral	Rat

**Acute Effects**

**Eyes** : Irritating to eyes.

**Skin** : Irritating to skin. May cause sensitization by skin contact. May be harmful if absorbed through skin.

**Inhalation** : Harmful by inhalation. Irritating to respiratory system.

**Ingestion** : Harmful if swallowed.

**Potential chronic health effects** : Carcinogenic effects Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Toluene]. Classified 2B (Possible for humans.) by IARC [Titanium dioxide]. Classified None. by NIOSH [Titanium dioxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Titanium dioxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Xylene]. Classified A3 (Proven for animals.) by ACGIH, 2B (Possible for humans.) by IARC [Ethylbenzene]. Classified None. by NIOSH [Ethylbenzene]. Classified + (Proven.) by NIOSH [Carbon Black]. Classified 2B (Possible for humans.) by IARC [Carbon Black]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Carbon Black].  
Mutagenic effects Not available.  
Teratogenic effects: Not available.

**Target organs** : Contains material which causes damage to the following organs: blood, kidneys, lungs, liver, peripheral nervous system, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea, nose/sinuses, throat.

**Special remarks on chronic effects on humans** : Embryotoxic and/or fetotoxic in animals. (Xylene)

**12 . Ecological information****Ecotoxicity data**

Product/ingredient name	Species	Period	Result
Toluene	Daphnia magna (EC50)	48 hour(s)	6 mg/l
	Daphnia magna (EC50)	48 hour(s)	6.56 mg/l
	Oncorhynchus mykiss (EC50)	48 hour(s)	6.78 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	5.8 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	6.78 mg/l
	Pimephales promelas (LC50)	96 hour(s)	12.6 mg/l
Titanium dioxide	Daphnia magna (EC50)	48 hour(s)	>1000 mg/l
	Xylene	Oncorhynchus mykiss (LC50)	96 hour(s)
Xylene	Oncorhynchus mykiss (LC50)	96 hour(s)	8.2 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	8.6 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	12 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	13.3 mg/l
	Pimephales promelas (LC50)	96 hour(s)	13.4 mg/l
	Heptan-2-one	Pimephales promelas (LC50)	96 hour(s)
Ethylbenzene	Daphnia magna (EC50)	48 hour(s)	2.93 mg/l
	Daphnia magna (EC50)	48 hour(s)	2.97 mg/l
	Selenastrum capricornutum (EC50)	48 hour(s)	7.2 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	4.2 mg/l
	Pimephales promelas (LC50)	96 hour(s)	9.09 mg/l
	Poecilia reticulata (LC50)	96 hour(s)	9.6 mg/l
Methyl ethyl ketone	Daphnia magna (EC50)	48 hour(s)	5091 mg/l
	Pimephales promelas (LC50)	96 hour(s)	3220 mg/l

**Environmental precautions** : No known significant effects or critical hazards.

**Products of degradation** : These products are carbon oxides and water, halogenated compounds. Some metallic oxides.

**Toxicity of the products of biodegradation** : The products of degradation are as toxic as the product itself.

## 13 . Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.

## 14 . Transport information

**NAERG** : 126

Regulatory information	Proper shipping name	Class	UN number	PG	Label
<b>UN / IMDG / IATA Classification</b>	AEROSOLS, FLAMMABLE, N.O.S. (each not exceeding 1 L capacity) (Difluoroethane, Toluene)	2.1	UN1950	-	
<b>DOT Classification</b>	AEROSOLS, FLAMMABLE, N.O.S. (each not exceeding 1 L capacity) (Difluoroethane, Toluene)	2.1	UN1950	-	
<b>TDG Classification</b>	AEROSOLS, FLAMMABLE, N.O.S. (each not exceeding 1 L capacity) (Difluoroethane, Toluene)	2.1	UN1950	-	

## 15 . Regulatory information

### United States

**HCS Classification** : Flammable aerosol.  
Pressure hazard  
Toxic material  
Irritating material  
Sensitizing material  
Carcinogen  
Target organ effects

**U.S. Federal regulations** : TSCA : All components listed.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Titanium dioxide; Xylene; Heptan-2-one; Difluoroethane; Ethylbenzene; Carbon Black; Methyl ethyl ketone; Stoddard Solvent; Toluene

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Titanium dioxide: Delayed (chronic) health hazard; Xylene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Heptan-2-one: Fire hazard, Immediate (acute) health hazard; Difluoroethane: Fire hazard, Sudden release of pressure, Delayed (chronic) health hazard; Ethylbenzene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Carbon Black: Immediate (acute) health hazard, Delayed (chronic) health hazard; Methyl ethyl ketone: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Stoddard Solvent: Fire hazard, Immediate (acute) health hazard; Toluene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: Ethylbenzene; Toluene

Clean Water Act (CWA) 311: Xylene; Ethylbenzene; Toluene  
 Clean Air Act (CAA) 112 accidental release prevention: Difluoroethane  
 Clean Air Act (CAA) 112 regulated flammable substances: Difluoroethane  
 Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

**SARA 313**

	Product name	CAS number	Concentration
<b>Form R - Reporting requirements</b>	: Toluene	108-88-3	10 - 30
	Xylene	1330-20-7	10 - 30
	Ethylbenzene	100-41-4	1 - 5
	Methyl ethyl ketone	78-93-3	1 - 5
<b>Supplier notification</b>	: Toluene	108-88-3	10 - 30
	Xylene	1330-20-7	10 - 30
	Ethylbenzene	100-41-4	1 - 5
	Methyl ethyl ketone	78-93-3	1 - 5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

**State regulations**

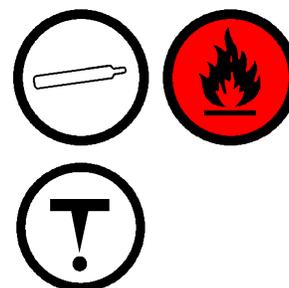
: Pennsylvania RTK: Titanium dioxide: (generic environmental hazard); Xylene: (environmental hazard, generic environmental hazard); Heptan-2-one: (generic environmental hazard); Ethylbenzene: (environmental hazard, generic environmental hazard); Carbon Black: (generic environmental hazard); Methyl ethyl ketone: (environmental hazard, generic environmental hazard); Stoddard Solvent: (generic environmental hazard); Toluene: (environmental hazard, generic environmental hazard)  
 Massachusetts RTK: Titanium dioxide; Xylene; Heptan-2-one; Difluoroethane; Ethylbenzene; Carbon Black; Methyl ethyl ketone; Stoddard Solvent; Toluene  
 New Jersey: Titanium dioxide; Xylene; Heptan-2-one; Difluoroethane; Ethylbenzene; Carbon Black; Methyl ethyl ketone; Stoddard Solvent; Toluene

**WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Toluene	No.	Yes.	No.	7000 µg/day (ingestion) 13000 µg/day (inhalation)
Ethylbenzene	Yes.	No.	No.	No.
Carbon Black	Yes.	No.	No.	No.

**Canada****WHMIS (Canada)**

: Class A: Compressed gas.  
 Class B-5: Flammable aerosol.  
 Class D-2A: Material causing other toxic effects (Very toxic).  
 Class D-2B: Material causing other toxic effects (Toxic).



DSL : All components listed.

This product has been classified in accordance with the hazard criteria of the Canadian CPR, the United States OSHA and the Mexican NOM -018-STPS-2000. This MSDS contains all the information required by the CPR, OSHA, the American National Standard Institute (ANSI) Z400.1 and NOM -018-STPS-2000.

**Mexico**

Classification :



## HAZARD RATINGS

4- Extreme  
 3- Serious  
 2- Moderate  
 1- Slight  
 0- Minimal

**International lists** : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

## 16 . Other information

**Label requirements (U.S.A.)** : EXTREMELY FLAMMABLE LIQUID AND VAPOR.  
 VAPOR MAY CAUSE FIRE.  
 CONTENTS UNDER PRESSURE.  
 CANCER HAZARD.  
 CONTAINS MATERIAL WHICH CAN CAUSE CANCER.  
 BIRTH DEFECT HAZARD.  
 CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.  
 HARMFUL IF INHALED OR SWALLOWED.  
 CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.  
 MAY CAUSE ALLERGIC SKIN REACTION.  
 CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:  
 BLOOD, KIDNEYS, LUNGS, LIVER, PERIPHERAL NERVOUS SYSTEM,  
 GASTROINTESTINAL TRACT, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS  
 SYSTEM, EYE, LENS OR CORNEA, NOSE, SINUSES, THROAT.

**Hazardous Material Information System (U.S.A.)** :

## HMIS RATING

Health	*	3
Fire hazard		4
Physical Hazard		1
Personal protection		J

## HAZARD RATINGS

4- Extreme  
 3- Serious  
 2- Moderate  
 1- Slight  
 0- Minimal  
 See section 8 for more detailed  
 information on personal protection.

**National Fire Protection Association (U.S.A.)** :



**References** : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005. - Official Mexican Standards NOM-018-STPS-2000 and NOM-004-SCT2-1994.

**Date of issue** : 11/15/2006

**Version** : 1

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.