

Safety Data Sheet according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 11/04/2016

Revision date: 23/01/2014

Version: 2.0

### **DLM-64**

1.1. Product identifier	
Product form	: Mixture
Product name.	: 1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D
Product code	: DLM-64
1.2. Relevant identified uses of t	the substance or mixture and uses advised against
1.2.1. Relevant identified uses	
Industrial/Professional use spec	: For professional use only.
1.2.2. Uses advised against	
No additional information available	
1.3. Details of the supplier of the	e safety data sheet
Cambridge Isotope Laboratories, Inc. 50 Frontage Road	
Andover, MA 01810	
USA	
USA: 1-800-322-1174 Int: 1-978-749-	-8000
cilsales@isotope.com www.isotope.co	om
Emergency telephone numb	per la
Emergency numbers:	
Chemtrec: 1-800-424-9300 (24 hours)	
International: 1-703-741-5970 (24 hour	
<b>SECTION 2: Hazards identifica</b>	ation
2.1. Classification of the substar	nce or mixture
Classification according to Regulatio	on (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Oral) H302	
Chip Irrit 0 U015	
Skin Irrit. 2 H315	
Eye Irrit. 2 H319	
Eye Irrit. 2         H319           Carc. 2         H351	
Eye Irrit. 2         H319           Carc. 2         H351	
Eye Irrit. 2         H319           Carc. 2         H351           STOT RE 2         H373	
Eye Irrit. 2H319Carc. 2H351STOT RE 2H373Full text of H-phrases: see section 16	
Eye Irrit. 2H319Carc. 2H351STOT RE 2H373Full text of H-phrases: see section 16Classification according to Directive (	67/548/EEC or 1999/45/EC
Eye Irrit. 2H319Carc. 2H351STOT RE 2H373Full text of H-phrases: see section 16Classification according to Directive Carc.Cat.3; R40	67/548/EEC or 1999/45/EC
Eye Irrit. 2 H319 Carc. 2 H351 STOT RE 2 H373 Full text of H-phrases: see section 16 Classification according to Directive ( Carc.Cat.3; R40 Repr.Cat.3; R62	67/548/EEC or 1999/45/EC
Eye Irrit. 2 H319 Carc. 2 H351 STOT RE 2 H373 Full text of H-phrases: see section 16 Classification according to Directive ( Carc.Cat.3; R40 Repr.Cat.3; R62 Repr.Cat.3; R63	67/548/EEC or 1999/45/EC
Eye Irrit. 2 H319 Carc. 2 H351 STOT RE 2 H373 Full text of H-phrases: see section 16 Classification according to Directive ( Carc.Cat.3; R40 Repr.Cat.3; R62 Repr.Cat.3; R63 F+; R12 T; R23	67/548/EEC or 1999/45/EC
Eye Irrit. 2 H319 Carc. 2 H351 STOT RE 2 H373 Full text of H-phrases: see section 16 Classification according to Directive ( Carc.Cat.3; R40 Repr.Cat.3; R62 Repr.Cat.3; R63 F+; R12 T; R23 T; R48/23	67/548/EEC or 1999/45/EC
Eye Irrit. 2 H319 Carc. 2 H351 STOT RE 2 H373 Full text of H-phrases: see section 16 Classification according to Directive ( Carc.Cat.3; R40 Repr.Cat.3; R62 Repr.Cat.3; R63 F+; R12 T; R23 T; R48/23 Xn; R22	67/548/EEC or 1999/45/EC
Eye Irrit. 2         H319           Carc. 2         H351           STOT RE 2         H373           Full text of H-phrases: see section 16           Classification according to Directive (Carc.Cat.3; R40           Repr.Cat.3; R62           Repr.Cat.3; R63           F+; R12           T; R23           T; R48/23           Xn; R22           Xi; R36/38	67/548/EEC or 1999/45/EC
Eye Irrit. 2       H319         Carc. 2       H351         STOT RE 2       H373         Full text of H-phrases: see section 16         Classification according to Directive O         Carc.Cat.3; R40         Repr.Cat.3; R62         Repr.Cat.3; R63         F+; R12         T; R23         T; R48/23         Xn; R22         Xi; R36/38         R52	67/548/EEC or 1999/45/EC
Eye Irrit. 2       H319         Carc. 2       H351         STOT RE 2       H373         Full text of H-phrases: see section 16         Classification according to Directive O         Carc.Cat.3; R40         Repr.Cat.3; R62         Repr.Cat.3; R63         F+; R12         T; R23         T; R48/23         Xn; R22         Xi; R36/38         R52	67/548/EEC or 1999/45/EC
Eye Irrit. 2 H319 Carc. 2 H351 STOT RE 2 H373 Full text of H-phrases: see section 16 Classification according to Directive ( Carc.Cat.3; R40 Repr.Cat.3; R62 Repr.Cat.3; R63 F+; R12 T; R23 T; R48/23	67/548/EEC or 1999/45/EC

Skin Irrit. 2 H315 Eye Irrit. 2A H319 Carc. 2 STOT RE 2 H351 H373

Adverse physicochemical, human health and environmental effects

Central nervous system, Blood, Liver, Cardiovascular system, Kidney.

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2.2. Label elements	
Labelling according to Regulation (EC) No.	o. 1272/2008 [CLP]
Hazard pictograms (CLP)	
	GHS08 GHS06 GHS07
Signal word (CLP)	: Danger
Hazardous ingredients	: CHLOROFORM-D (D, 99.8%)
Hazard statements (CLP)	<ul> <li>H302 - Harmful if swallowed</li> <li>H315 - Causes skin irritation</li> <li>H319 - Causes serious eye irritation</li> <li>H351 - Suspected of causing cancer</li> <li>H373 - May cause damage to organs (blood, central nervous system, kidneys, liver, cardiovascular system) through prolonged or repeated exposure</li> </ul>
Precautionary statements (CLP)	<ul> <li>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking</li> <li>P233 - Keep container tightly closed</li> <li>P240 - Ground/bond container and receiving equipment</li> <li>P241 - Use explosion-proof electrical equipment</li> <li>P260 - Do not breathe dust, gas, fume, mist, spray, vapours</li> <li>P264 - Wash Both hands thoroughly after handling</li> <li>P270 - Do no eat, drink or smoke when using this product</li> <li>P271 - Use only outdoors or in a well-ventilated area</li> </ul>
GHS-US labelling	
Hazard pictograms (GHS-US)	HS08 GHS06 GHS07
Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	<ul> <li>H302 - Harmful if swallowed</li> <li>H315 - Causes skin irritation</li> <li>H319 - Causes serious eye irritation</li> <li>H351 - Suspected of causing cancer (Dermal, Inhalation, oral)</li> <li>H373 - May cause damage to organs (cardiovascular system, central nervous system, blood, kidneys, liver) through prolonged or repeated exposure (Dermal, Inhalation, oral)</li> </ul>
Precautionary statements (GHS-US)	<ul> <li>P201 - Obtain special instructions before use</li> <li>P202 - Do not handle until all safety precautions have been read and understood</li> <li>P260 - Do not breathe dust, fume, gas, mist, spray, vapours</li> <li>P264 - Wash Both hands thoroughly after handling</li> <li>P270 - Do no eat, drink or smoke when using this product</li> <li>P280 - Wear protective clothing, protective gloves</li> <li>P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell</li> <li>P302+P352 - IF ON SKIN: Wash with plenty of soap and water</li> <li>P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact</li> <li>lenses, if present and easy to do. Continue rinsing</li> <li>P308+P313 - IF exposed or concerned: Get medical advice/attention</li> <li>P314 - Get medical advice and attention if you feel unwell</li> <li>P322 + P313 - IF swallowed, rinse mouth</li> <li>P332+P313 - If skin irritation occurs: Get medical advice/attention</li> <li>P362 - Take off contaminated clothing and wash before reuse</li> <li>P405 - Store locked up</li> <li>P501 - Dispose of contents/container to Comply with applicable regulations.</li> </ul>
2.3 Other hazards	

### 2.3. Other hazards

No additional information available

No addii			
SECTI	ON 3: Composition/information on ingredients		
3.1.	Substances		
Not app	licable		

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3.2. Mixture			
Name	Product identifier	%	Classification according to Directive 67/548/EEC
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC no) 200-663-8 (EC index no) 602-006-00-4	99.9856	Carc.Cat.3; R40 T; R23 Xi; R36/38 Xn; R22 R67 Repr.Cat.3; R62 Repr.Cat.3; R63 R52 T; R48/23
TETRAMETHYLSILANE 99.9%	(CAS No) 75-76-3 (EC no) 200-899-1	0.0086	F+; R12
ETHYLBENZENE UNLABELED	(CAS No) 100-41-4 (EC no) 202-849-4 (EC index no) 601-023-00-4	0.0058	F; R11 Xn; R20
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6 (EC no) 200-663-8 (EC index no) 602-006-00-4	99.9856	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 Repr. 2, H361fd STOT SE 3, H336 STOT RE 1, H372
TETRAMETHYLSILANE 99.9%	(CAS No) 75-76-3 (EC no) 200-899-1	0.0086	Flam. Liq. 1, H224
ETHYLBENZENE UNLABELED	(CAS No) 100-41-4 (EC no) 202-849-4 (EC index no) 601-023-00-4	0.0058	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:vapour), H332 Carc. 2, H351
Name	Product identifier	%	GHS-US classification
CHLOROFORM-D (D, 99.8%)	(CAS No) 865-49-6	99.9856	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H336 STOT RE 1, H372 Aquatic Acute 3, H402

### Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures		
4.1. Description of first aid measures		
First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.	
First-aid measures after inhalation	: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.	
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.	
First-aid measures after eye contact	: Flush eye with water for 15 minutes. Get medical attention.	
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER/doctor/physician if you feel unwell.	
4.2. Most important symptoms and eff	ects, both acute and delayed	
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.	
Symptoms/injuries after skin contact	: Causes skin irritation.	
Symptoms/injuries after eye contact	: Causes eye irritation.	
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.	
4.3. Indication of any immediate media	al attention and special treatment needed	
No additional information available		
<b>SECTION 5: Firefighting measures</b>		
5.1. Extinguishing media		
Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.	
5.2. Special hazards arising from the substance or mixture		
No additional information available		

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5.3. Advice for firefighter	'S		
Firefighting instructions	hting instructions : Wear self-contained breathing apparatus when entering area unless atmosphere is proved to		
Protection during firefighting	safe. refighting : Do not enter fire area without proper protective equipment, including respiratory protection.		
SECTION 6: Accidental release measures			
		e e e duras	
	s, protective equipment and emergency pro	ocedures	
6.1.1. For non-emergency personnel			
mergency procedures : Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.			
6.1.2. For emergency responders			
No additional information availal	ble		
6.2. Environmental preca	utions		
Prevent further leakage or spilla	ge if safe to do so. Do not let product enter dra	ains.	
	al for containment and cleaning up		
For containment	: Soak up with inert absorb closed containers for disp	pent material and dispose of as hazardous waste. Keep in suitable, posal.	
6.4. Reference to other s	ections		
No additional information availal	ble		
<b>SECTION 7: Handling ar</b>	nd storage		
7.1. Precautions for safe	•		
Additional hazards when processed : Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.			
Hygiene measures	Hygiene measures       Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.		
7.2. Conditions for safe s	storage, including any incompatibilities		
Storage conditions	: Store at room temperatur	e away from light and moisture.	
7.3. Specific end use(s)			
No additional information availal	ble		
SECTION 8: Exposure c	ontrols/personal protection		
8.1. Control parameters			
1% ETHYLBENZENE + 2% TI	1		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10.0000000000 ppm Confirmed animal carcinogen with unknown relevance to humans.	
ETHYLBENZENE UNLABELE	ED (100-41-4)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100.0000000000 ppm Confirmed animal carcinogen with unknown relevance to humans	
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	125.0000000000 ppm Central Nervous System impairment. Upper Respiratory Tract irritation	
USA OSHA	OSHA PEL (TWA) (mg/m3)	435.000000000 mg/m <sup>3</sup>	
USA OSHA	OSHA PEL (STEL) (mg/m3)	545.000000000 mg/m <sup>3</sup>	
CHLOROFORM-D (D, 99.8%)	(865-49-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10.0000000000 ppm Confirmed animal carcinogen with unknown relevance to humans.	
USA NIOSH	NIOSH REL (STEL) (mg/m3)	9.78 mg/m³	
USA NIOSH	NIOSH REL (STEL) (ppm)	2 ppm	
USA OSHA	OSHA PEL (Ceiling) (mg/m3)	240 mg/m <sup>3</sup>	
USA OSHA	OSHA PEL (Ceiling) (ppm)	50 ppm	
L	1	1	

### 8.2. **Exposure controls**

Personal protective equipment

: Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



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Hand protection	: Wear suitable protective clothing and gloves.
Eye protection	: Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear appropriate NIOSH/MSHA approved respirator.

### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and	chemical properties
The properties listed below are for the solvent, the main compo	onent of this mixture.
Physical state	: Liquid
Appearance	: Liquid, clear.
Molecular mass	: 120.38 g/mol (Labeled)
Colour	: Colourless.
Odour	: No data available
Odour threshold	: No data available
рН	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -63 °C (-81 °F)
Freezing point	: No data available
Boiling point	: 60.5 - 61.5 °C (140.9 - 142.7 °F)
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 213.3 hPa (160.0 mmHg) at 20.0 °C (68.0 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.5 g/mL at 25 °C (77 °F) (Labeled)
Solubility	: No data available
Log Pow	: 1.97
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising 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 additional information available			
10.2. Chemical stability			
Stable if stored under recommended conditions.			
10.3. Possibility of hazardous reactions			
No additional information available	No additional information available		
10.4. Conditions to avoid			
Not available.			
10.5. Incompatible materials			
Strong oxidizing agents, Strong bases, Magnesium, Sodium/Sodium oxides, Lithium.			
10.6. Hazardous decomposition products	6. Hazardous decomposition products		
Formed under fire conditions: Carbon oxides, Hydrogen chloride gas.			
SECTION 11: Toxicological information			
11.1. Information on toxicological effects			
Acute toxicity	: Harmful if swallowed.		
1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D			
LD50 oral rat	908 mg/kg		
12/04/2016	EN (English) 5/11		

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1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D		
LD50 dermal rabbit	> 20000 mg/kg	
LC50 inhalation rat (ppm)	500 ppm/4h	
ATE (oral)	500.000 mg/kg bodyweight	
ATE (gases)	500.000 ppmV/4h	
ATE (vapours)	3.000 mg/l/4h	
ATE (dust,mist)	0.500 mg/l/4h	
ETHYLBENZENE UNLABELED (100-41-4)		
LD50 oral rat	3500 mg/kg	
LD50 dermal rabbit	15433 mg/kg	
ATE (oral)	3500.000 mg/kg bodyweight	
ATE (dermal)	15433.000 mg/kg bodyweight	
ATE (vapours)	11.000 mg/l/4h	
CHLOROFORM-D (D, 99.8%) (865-49-6)		
LD50 oral rat	908 mg/kg	
LD50 dermal rabbit	> 20000 mg/kg	
LC50 inhalation rat (ppm)	500 ppm/4h	
ATE (oral)	908.000 mg/kg bodyweight	
ATE (gases)	500.000 ppmV/4h	
ATE (vapours)	3.000 mg/l/4h	
ATE (dust,mist)	0.500 mg/l/4h	
Skin corrosion/irritation	: Causes skin irritation.	
	No data available	
Serious eye damage/irritation	: Causes serious eye irritation.	
	No data available	
Respiratory or skin sensitisation	: Not available.	
	No data available	
Germ cell mutagenicity	: Not available.	
Carcinogenicity	: Suspected of causing cancer.	
Reproductive toxicity	: Suspected reproductive toxicant.	
	: Not classified	
opeene target organ toxicity (single exposure)	No data available	
Chapter to react areas to visity (reported	: May cause damage to organs (blood, central nervous system, kidnevs, liver, cardiovascular	
Specific target organ toxicity (repeated exposure)	system) through prolonged or repeated exposure.	
	No data available	
Aspiration hazard	: Not classified	
symptoms	: Harmful if swallowed.	
IARC group	: 2B	
	: May be harmful if inhaled. Causes respiratory tract irritation.	
Symptoms/injuries after inhalation	. May be naminum initiated. Causes respiratory tract initiation.	
Symptoms/injuries after inhalation Symptoms/injuries after skin contact	: Causes skin irritation.	

SECTION 12: Ecological information		
12.1. Toxicity		
1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D		
LC50 fishes 1	162.00 mg/l Leuciscus idus (Golden orfe) - 48 h	
LC50 other aquatic organisms 1	97 mg/l Other fish - 96 h	
EC50 Daphnia 1	79.00 mg/l Daphnia magna (Water flea) - 48 h	
EC50 other aquatic organisms 1	51.6 mg/l Daphnia magna (Water flea) - 48 h	
LC50 fish 2	121 mg/l Danio rerio (Zebra fish) - 96 h	
LC50 other aquatic organisms 2	500 mg/l No information available - 24 h	
ErC50 (algae)	500.00 mg/l 24 h	
NOEC (chronic)	122 mg/l Oryzias latipes (Japanese rice fish) - 10 d	
NOEC chronic fish	24 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h	

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1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D			
NOEC chronic algae	120 mg/l Daphnia magna (Water flea) - 11 d		
ETHYLBENZENE UNLABELED (100-41-4)			
LC50 fishes 1	88.00 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h		
EC50 Daphnia 1	2.90 mg/l Daphnia magna (Water flea) - 48 h		
CHLOROFORM-D (D, 99.8%) (865-49-6)	CHLOROFORM-D (D, 99.8%) (865-49-6)		
LC50 fishes 1	162.00 mg/l Leuciscus idus (Golden orfe) - 48 h		
LC50 other aquatic organisms 1	97 mg/l Other fish - 96 h		
EC50 Daphnia 1	79.00 mg/l Daphnia magna (Water flea) - 48 h		
EC50 other aquatic organisms 1	51.6 mg/l Daphnia magna (Water flea) - 48 h		
LC50 fish 2	121 mg/l Danio rerio (Zebra fish) - 96 h		
LC50 other aquatic organisms 2	500 mg/l No information available - 24 h		
ErC50 (algae)	500.00 mg/l 24 h		
NOEC (chronic)	122 mg/l Oryzias latipes (Japanese rice fish) - 10 d		
NOEC chronic fish	24 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h		
NOEC chronic algae	120 mg/l Daphnia magna (Water flea) - 11 d		

12.2. Persistence and degradability	
1% ETHYLBENZENE + 2% TMS IN CHLOROF	ORM-D
Persistence and degradability	Not available.
ETHYLBENZENE UNLABELED (100-41-4)	
Persistence and degradability	Not available.
TETRAMETHYLSILANE 99.9% (75-76-3)	
Persistence and degradability	Not available.
CHLOROFORM-D (D, 99.8%) (865-49-6)	
Persistence and degradability	Not available.
12.3. Bioaccumulative potential	
1% ETHYLBENZENE + 2% TMS IN CHLOROF	ORM-D
BCF fish 1	-0.11 mg/l Lepomis macrochirus (Bluegill) - 14 d
Bioconcentration factor (BCF REACH)	6
Log Pow	1.97
Bioaccumulative potential	Not available.
ETHYLBENZENE UNLABELED (100-41-4)	
Log Pow	2.92
Bioaccumulative potential	Not available.
TETRAMETHYLSILANE 99.9% (75-76-3)	
Bioaccumulative potential	Not available.
CHLOROFORM-D (D, 99.8%) (865-49-6)	
BCF fish 1	-0.11 mg/l Lepomis macrochirus (Bluegill) - 14 d
Bioconcentration factor (BCF REACH)	6
Log Pow	1.97
Bioaccumulative potential	Not available.
12.4. Mobility in soil	
1% ETHYLBENZENE + 2% TMS IN CHLOROF	ORM-D
Ecology - soil	Not available.
ETHYLBENZENE UNLABELED (100-41-4)	
Ecology - soil	Not available.
TETRAMETHYLSILANE 99.9% (75-76-3)	
Ecology - soil	Not available.
CHLOROFORM-D (D, 99.8%) (865-49-6)	
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assessment	

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12.6. Other adverse effects	
Other adverse effects	: An environmental hazard cannot be excluded in the event of an unprofessional handling or disposal. Harmful to aquatic life.
SECTION 13: Disposal consideration	ns
13.1. Waste treatment methods	
Regional legislation (waste)	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact licensed disposal company to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an after burner and scrubber.
Waste disposal recommendations	: Dispose of as unused product.
SECTION 14: Transport information	
In accordance with ADR / RID / ADNR / IMDG /	ICAO / IATA
14.1. UN number	
UN-No.(DOT)	: 1888
DOT NA no.	UN1888
14.2. UN proper shipping name	
DOT Proper Shipping Name	: Chloroform
Department of Transportation (DOT) Hazard Classes	: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Hazard labels (DOT)	: 6.1 - Poison inhalation hazard
Packing group (DOT)	: III - Minor Danger
DOT Special Provisions (49 CFR 172.102)	<ul> <li>IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquid: with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).</li> <li>N36 - Aluminum or aluminum alloy construction materials are permitted only for halogenated hydrocarbons that will not react with aluminum.</li> <li>T7 - 4 178.274(d)(2) Normal</li></ul>
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
Marine pollutant	: No
14.2 Additional information	
14.3. Additional information Other information	· No supplementary information available
	: No supplementary information available.
Overland transport	
Packing group (ADR)	: 111
Class (ADR)	: 6.1 - Toxic substances
Hazard identification number (Kemler No.)	: 60
Classification code (ADR)	: T1
Danger labels (ADR)	: 6.1 - Toxic substances
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Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Orange plates	: 60 1888	
Tunnel restriction code	: E	
Limited quantities (ADR)	5L	
EAC code	: 2Z	
Excepted quantities (ADR)	: E1	
Transport by sea		
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.	
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"	
MFAG-No	: 151	
Air transport		
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L	
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L	
Civil Aeronautics Law	: Toxic and infectious substances/Toxic substances(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)	
14.4. Environmental hazards		
Other information	: No supplementary information available.	
14.5. Special precautions for user		
14.6. Transport in bulk according to Anne	x II of MARPOL 73/78 and the IBC Code	
Not applicable		
SECTION 15: Regulatory information		
15.1. US Federal regulations		
1% ETHYLBENZENE + 2% TMS IN CHLOROF	FORM-D	
Listed on SARA Section 302 (Specific toxic chemical listings) Listed on SARA Section 313 (Specific toxic chemical listings)		
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard	
CHLOROFORM-D (D, 99.8%) (865-49-6)		
Listed on SARA Section 302 (Specific toxic che Listed on SARA Section 313 (Specific toxic che		
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard	

### 15.2. International regulations

CANADA	
1% ETHYLBENZENE + 2%	% TMS IN CHLOROFORM-D
Listed on the Canadian DS	L (Domestic Sustances List) inventory.
CHLOROFORM-D (D, 99.8	3%) (865-49-6)
Listed on the Canadian DS	L (Domestic Sustances List) inventory.

### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

Toto. OO Otate regulations		
1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D()		
U.S California - Proposition 65 - Carcinogens List	Yes	
U.S California - Proposition 65 - Reproductive	Yes	

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1% ETHYLBENZENE + 2% TMS IN CHLOROFORM-D()	
Toxicity - Female	
U.S California - Proposition 65 - Reproductive Toxicity - Male	Yes
State or local regulations	U.S Massachusetts - Right To Know List U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List WARNING! This product contains a chemical known by the state of California to cause cancer, birth defects or other reproductive harm.

CHLOROFORM-D (D, 99.8%	6) (865-49-6)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes		Yes	Yes	

### CHLOROFORM-D (D, 99.8%) (865-49-6)

U.S. - Massachusetts - Right To Know List

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - New Jersey - Right to Know Hazardous Substance List

WARNING! This product contains a chemical known by the state of California to cause cancer, birth defects or other reproductive harm.

### **SECTION 16: Other information**

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

### Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Inhalation:vapour)AAcute Tox. 4 (Oral)ACarc. 2CEye Irrit. 2SFlam. Liq. 1FFlam. Liq. 2FRepr. 2RSkin Irrit. 2SSTOT RE 1SSTOT SE 3S	Acute toxicity (inhal.), Category 3 Acute toxicity (inhalation:vapour) Category 4 Acute toxicity (oral), Category 4 Carcinogenicity, Category 2 Serious eye damage/eye irritation, Category 2 Flammable liquids, Category 1 Flammable liquids, Category 2 Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Acute Tox. 4 (Oral)ACarc. 2CEye Irrit. 2SFlam. Liq. 1FFlam. Liq. 2FRepr. 2RSkin Irrit. 2SSTOT RE 1SSTOT SE 3S	Acute toxicity (oral), Category 4 Carcinogenicity, Category 2 Serious eye damage/eye irritation, Category 2 Flammable liquids, Category 1 Flammable liquids, Category 2 Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Carc. 2CEye Irrit. 2SFlam. Liq. 1FFlam. Liq. 2FRepr. 2RSkin Irrit. 2SSTOT RE 1SSTOT RE 2SSTOT SE 3S	Carcinogenicity, Category 2 Serious eye damage/eye irritation, Category 2 Flammable liquids, Category 1 Flammable liquids, Category 2 Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Eye Irrit. 2SFlam. Liq. 1FFlam. Liq. 2FRepr. 2RSkin Irrit. 2SSTOT RE 1SSTOT RE 2SSTOT SE 3S	Serious eye damage/eye irritation, Category 2 Flammable liquids, Category 1 Flammable liquids, Category 2 Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Flam. Liq. 1         F           Flam. Liq. 2         F           Repr. 2         R           Skin Irrit. 2         S           STOT RE 1         S           STOT RE 2         S           STOT SE 3         S	Flammable liquids, Category 1 Flammable liquids, Category 2 Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Flam. Liq. 2FRepr. 2RSkin Irrit. 2SSTOT RE 1SSTOT RE 2SSTOT SE 3S	Flammable liquids, Category 2 Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Repr. 2RSkin Irrit. 2SSTOT RE 1SSTOT RE 2SSTOT SE 3S	Reproductive toxicity, Category 2 Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
Skin Irrit. 2SSTOT RE 1SSTOT RE 2SSTOT SE 3S	Skin corrosion/irritation, Category 2 Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
STOT RE 1SSTOT RE 2SSTOT SE 3S	Specific target organ toxicity — Repeated exposure, Category 1 Specific target organ toxicity — Repeated exposure, Category 2
STOT RE 2SSTOT SE 3S	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3 S	
	Specific target organ toxicity — Single exposure, Category 3, Narcosis
	Extremely flammable liquid and vapour
H225 H	Highly flammable liquid and vapour
H302 H	Harmful if swallowed
H315 C	Causes skin irritation
H319 C	Causes serious eye irritation
H331 T	Toxic if inhaled
H332 H	Harmful if inhaled
H336 N	May cause drowsiness or dizziness
H351 S	Suspected of causing cancer
H361fd S	Suspected of damaging fertility. Suspected of damaging the unborn child
H372 C	Causes damage to organs through prolonged or repeated exposure
H373 N	May cause damage to organs through prolonged or repeated exposure
R11 H	Highly flammable
R12 E	Extremely flammable
R20 H	Harmful by inhalation
	Harmful if swallowed
R23 T	Toxic by inhalation
	Irritating to eyes and skin
	Limited evidence of a carcinogenic effect
	Toxic: danger of serious damage to health by prolonged exposure through inhalation
	Harmful to aquatic organisms

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R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
F+	Extremely flammable
Т	Toxic
Xi	Irritant
Xn	Harmful

NFPA health hazard	<ul> <li>3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.</li> </ul>	
NFPA fire hazard	: 0 - Materials that will not burn.	
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.	
HMIS III Rating		

Third in Rating	
Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard

CIL Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product