

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Revised 8270 Cal Mix 1
Product code : AL0-131107

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Phenova
6390 Joyce Dr. Suite 100
Golden, CO 80403 - United States
T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924
ChemTel Assistance (International) +1 813-248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 1B	H350	May cause cancer
Reproductive toxicity Category 1B	H360	May damage fertility or the unborn child

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor
H317 - May cause an allergic skin reaction
H350 - May cause cancer
H360 - May damage fertility or the unborn child

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.
Methylene Chloride (Component)	(CAS-No.) 75-09-2	93.62
4-chloro-3-methylphenol (Component)	(CAS-No.) 59-50-7	0.4
4,6-Dinitro-2-methylphenol (Component)	(CAS-No.) 534-52-1	0.4
2,3,4,5,6-pentachlorophenol (Component)	(CAS-No.) 87-86-5	0.2
4-chloroaniline (Component)	(CAS-No.) 106-47-8	0.1
Bis(2-ethylhexyl) phthalate (Component)	(CAS-No.) 117-81-7	0.1
1,4-dichlorobenzene (Component)	(CAS-No.) 106-46-7	0.1
hexachloroethane (Component)	(CAS-No.) 67-72-1	0.1
isophorone (Component)	(CAS-No.) 78-59-1	0.1
hydrazobenzene (Component)	(CAS-No.) 122-66-7	0.1
N-Nitrosodiethylamine (Component)	(CAS-No.) 55-18-5	0.1

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

No additional information available

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up in absorbent material. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
- Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container closed when not in use. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
- Incompatible materials : Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Revised 8270 Cal Mix 1		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA

Bis(2-ethylhexyl) phthalate (117-81-7)		
ACGIH	Local name	Di(2-ethylhexyl)phthalate (DEHP)
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
ACGIH	Remark (ACGIH)	LRT irr
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA

4-chloroaniline (106-47-8)		
Not applicable		

4-chloro-3-methylphenol (59-50-7)		
Not applicable		

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

1,4-dichlorobenzene (106-46-7)		
ACGIH	Local name	p-Dichlorobenzene
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	Remark (ACGIH)	Eye irr; kidney dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	450 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	75 ppm
OSHA	OSHA PEL (STEL) (mg/m ³)	675 mg/m ³
OSHA	OSHA PEL (STEL) (ppm)	110 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
4,6-Dinitro-2-methylphenol (534-52-1)		
ACGIH	Local name	Dinitro-o-cresol
ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
ACGIH	Remark (ACGIH)	Basal metab
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	0.2 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA
hydrazobenzene (122-66-7)		
Not applicable		
hexachloroethane (67-72-1)		
ACGIH	Local name	Hexachloroethane
ACGIH	ACGIH TWA (ppm)	1 ppm
ACGIH	Remark (ACGIH)	Liver & kidney dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	10 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
isophorone (78-59-1)		
ACGIH	Local name	Isophorone
ACGIH	ACGIH Ceiling (ppm)	5 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr; CNS impair;
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	140 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	25 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA
N-Nitrosodiethylamine (55-18-5)		
Not applicable		
2,3,4,5,6-pentachlorophenol (87-86-5)		
ACGIH	Local name	Pentachlorophenol
ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³ (Inhalable fraction and vapor)
ACGIH	ACGIH STEL (mg/m ³)	1 mg/m ³ (Inhalable fraction and vapor)

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2,3,4,5,6-pentachlorophenol (87-86-5)		
ACGIH	Remark (ACGIH)	URT & eye irr; CNS & card impair; Skin; A3 (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); BEI
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	0.5 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA
Methylene Chloride (75-09-2)		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA

8.2. Appropriate engineering controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.

Hand protection:

Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration

Eye protection:

Chemical goggles or safety glasses. Safety glasses

Skin and body protection:

Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact

Respiratory protection:

Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

	: Colorless
	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: 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

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Bis(2-ethylhexyl) phthalate (117-81-7)	
LD50 dermal rabbit	19800 mg/kg body weight (24 h, Rabbit, Experimental value, Dermal)
ATE US (dermal)	19800 mg/kg body weight
4-chloroaniline (106-47-8)	
LD50 oral rat	300 – 340 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	360 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	2.34 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	300 mg/kg body weight
ATE US (dermal)	360 mg/kg body weight

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

4-chloroaniline (106-47-8)	
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	2.34 mg/l/4h
ATE US (dust, mist)	2.34 mg/l/4h
4-chloro-3-methylphenol (59-50-7)	
LD50 oral rat	1830 mg/kg body weight (Rat, Male, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
ATE US (oral)	1830 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
1,4-dichlorobenzene (106-46-7)	
LD50 dermal rat	> 6000 mg/kg (Rat, Dermal)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 5 mg/l (4 h, Rat, Inhalation)
ATE US (oral)	500 mg/kg body weight
4,6-Dinitro-2-methylphenol (534-52-1)	
LD50 oral rat	7 – 40 mg/kg (Rat, Oral)
ATE US (oral)	7 mg/kg body weight
ATE US (dermal)	5 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h
hydrazobenzene (122-66-7)	
LD50 oral rat	301 mg/kg (Rat, Oral)
ATE US (oral)	301 mg/kg body weight
hexachloroethane (67-72-1)	
LD50 oral rat	4460 mg/kg (Rat, Oral)
LD50 dermal rabbit	32000 mg/kg (Rabbit, Dermal)
ATE US (oral)	4460 mg/kg body weight
ATE US (dermal)	32000 mg/kg body weight
isophorone (78-59-1)	
LD50 oral rat	1500 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 13 day(s))
LD50 dermal rabbit	1200 mg/kg body weight (24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	7 mg/l (4 h, Rat, Male, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	1500 mg/kg body weight
ATE US (dermal)	1200 mg/kg body weight
ATE US (vapors)	7 mg/l/4h
ATE US (dust, mist)	7 mg/l/4h
N-Nitrosodiethylamine (55-18-5)	
LD50 oral rat	220 mg/kg (Rat, Oral)
ATE US (oral)	220 mg/kg body weight
2,3,4,5,6-pentachlorophenol (87-86-5)	
LC50 inhalation rat (mg/l)	355 mg/m ³ (Rat, Literature, Inhalation)
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h
Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

Skin corrosion/irritation : Not classified

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer.

Bis(2-ethylhexyl) phthalate (117-81-7)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

4-chloroaniline (106-47-8)	
IARC group	2B - Possibly carcinogenic to humans

1,4-dichlorobenzene (106-46-7)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

hydrazobenzene (122-66-7)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

hexachloroethane (67-72-1)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

N-Nitrosodiethylamine (55-18-5)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

2,3,4,5,6-pentachlorophenol (87-86-5)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Methylene Chloride (75-09-2)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity	: May damage fertility or the unborn child. Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

4-chloroaniline (106-47-8)	
LC50 fish 1	2.4 mg/l (Other, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value)

4-chloro-3-methylphenol (59-50-7)	
LC50 fish 1	3.71 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	1.5 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

1,4-dichlorobenzene (106-46-7)	
LC50 fish 1	1.12 mg/l (96 h, Salmo gairdneri, Flow-through system)
EC50 Daphnia 1	0.7 mg/l (48 h, Daphnia magna, Measured concentration)

4,6-Dinitro-2-methylphenol (534-52-1)	
LC50 fish 1	0.066 mg/l (96 h, Salmo gairdneri, Literature study)
EC50 Daphnia 1	0.145 mg/l (48 h, Daphnia magna, Literature study)

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

hydrazobenzene (122-66-7)	
LC50 fish 1	0.27 mg/l (96 h, Lepomis macrochirus, Static system)
EC50 Daphnia 1	2.18 mg/l (48 h, Daphnia magna)
hexachloroethane (67-72-1)	
LC50 fish 1	0.84 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	1.4 mg/l (Daphnia magna)
isophorone (78-59-1)	
LC50 fish 1	228 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	254 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
N-Nitrosodiethylamine (55-18-5)	
LC50 fish 1	775 mg/l (96 h, Pimephales promelas)
2,3,4,5,6-pentachlorophenol (87-86-5)	
LC50 fish 1	0.052 mg/l (96 h, Salmo gairdneri)
EC50 Daphnia 1	0.01 – 0.36 mg/l (48 h, Daphnia magna)
Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	168.2 mg/l (48 h, Daphnia magna)
12.2. Persistence and degradability	
Revised 8270 Cal Mix 1	
Persistence and degradability	Not established.
Bis(2-ethylhexyl) phthalate (117-81-7)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
4-chloroaniline (106-47-8)	
Persistence and degradability	Non degradable in the soil. Inherently biodegradable. Not readily biodegradable in water.
4-chloro-3-methylphenol (59-50-7)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water. Inherently biodegradable.
Chemical oxygen demand (COD)	1.5 – 1.8 g O ₂ /g substance
1,4-dichlorobenzene (106-46-7)	
Persistence and degradability	Non degradable in the soil. Readily biodegradable in water.
ThOD	1.52 g O ₂ /g substance
BOD (% of ThOD)	0.65 (Calculated value)
4,6-Dinitro-2-methylphenol (534-52-1)	
Persistence and degradability	Not readily biodegradable in water.
hydrazobenzene (122-66-7)	
Persistence and degradability	Not readily biodegradable in water.
hexachloroethane (67-72-1)	
Persistence and degradability	Readily biodegradable in water.
isophorone (78-59-1)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.78 g O ₂ /g substance
N-Nitrosodiethylamine (55-18-5)	
Persistence and degradability	Not readily biodegradable in water.
2,3,4,5,6-pentachlorophenol (87-86-5)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Methylene Chloride (75-09-2)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.3. Bioaccumulative potential

Revised 8270 Cal Mix 1	
Bioaccumulative potential	Not established.
Bis(2-ethylhexyl) phthalate (117-81-7)	
BCF fish 1	155 – 886 (56 day(s), Pimephales promelas, Literature study)
Partition coefficient n-octanol/water (Log Pow)	7.68 (Experimental value, Other)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
4-chloroaniline (106-47-8)	
BCF fish 1	0.8 – 1.7 (336 h, Cyprinus carpio, Literature study)
BCF other aquatic organisms 1	260 (24 h, Chlorella fusca, Static system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.87 (Experimental value, Equivalent or similar to OECD 117)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
4-chloro-3-methylphenol (59-50-7)	
BCF fish 1	5.5 – 13 (Cyprinus carpio, Test duration: 6 weeks)
Partition coefficient n-octanol/water (Log Pow)	2.78 – 3.1
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,4-dichlorobenzene (106-46-7)	
BCF fish 1	214 – 720 (Salmo gairdneri, Chronic)
Partition coefficient n-octanol/water (Log Pow)	3.39 – 3.62 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
4,6-Dinitro-2-methylphenol (534-52-1)	
BCF fish 1	0.3 – 2.9 (6 week(s), Cyprinus carpio, Literature study)
Partition coefficient n-octanol/water (Log Pow)	2.12 – 3.1 (Literature study)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
hydrazobenzene (122-66-7)	
Partition coefficient n-octanol/water (Log Pow)	2.94
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
hexachloroethane (67-72-1)	
BCF fish 1	1200 (Salmo gairdneri)
BCF fish 2	756 mg/l (768 h, Pimephales promelas)
Partition coefficient n-octanol/water (Log Pow)	3.34 – 4.62
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
isophorone (78-59-1)	
BCF fish 1	7 (Other, 14 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.67 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
N-Nitrosodiethylamine (55-18-5)	
BCF other aquatic organisms 1	1 (Estimated value)
Partition coefficient n-octanol/water (Log Pow)	0.48
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
2,3,4,5,6-pentachlorophenol (87-86-5)	
BCF fish 1	770 (768 h, Pimephales promelas)
BCF fish 2	39 – 224 (Cyprinus carpio, Test duration: 8 weeks)
BCF other aquatic organisms 1	1250 (Algae)
Partition coefficient n-octanol/water (Log Pow)	4.07 – 5.19
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
Methylene Chloride (75-09-2)	
BCF fish 1	2 – 40 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Semi-static system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	1.25 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.4. Mobility in soil

Bis(2-ethylhexyl) phthalate (117-81-7)	
Surface tension	0.032 N/m (20 °C)
Partition coefficient n-octanol/water (Log Koc)	5.2 (log Koc, Calculated value)
Ecology - soil	Adsorbs into the soil. Low potential for mobility in soil.
4-chloroaniline (106-47-8)	
Ecology - soil	No (test)data on mobility of the substance available. Soil contaminant.
4-chloro-3-methylphenol (59-50-7)	
Surface tension	Not applicable (solid)
Partition coefficient n-octanol/water (Log Koc)	2.69 (log Koc)
Ecology - soil	Low potential for adsorption in soil.
1,4-dichlorobenzene (106-46-7)	
Surface tension	0.03 N/m (55 °C)
Ecology - soil	Adsorbs into the soil.
4,6-Dinitro-2-methylphenol (534-52-1)	
Ecology - soil	No (test)data on mobility of the substance available.
isophorone (78-59-1)	
Surface tension	32 mN/m (20 °C)
Partition coefficient n-octanol/water (Log Koc)	1.766 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.
2,3,4,5,6-pentachlorophenol (87-86-5)	
Ecology - soil	No (test)data on mobility of the substance available.
Methylene Chloride (75-09-2)	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Revised 8270 Cal Mix 1	
Bis(2-ethylhexyl) phthalate (117-81-7)	
4-chloroaniline (106-47-8)	
4-chloro-3-methylphenol (59-50-7)	
1,4-dichlorobenzene (106-46-7)	
4,6-Dinitro-2-methylphenol (534-52-1)	
hydrazobenzene (122-66-7)	
hexachloroethane (67-72-1)	
isophorone (78-59-1)	
N-Nitrosodiethylamine (55-18-5)	
2,3,4,5,6-pentachlorophenol (87-86-5)	

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Methylene Chloride (75-09-2)

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (dichloromethane ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; 2,3,4,5,6-pentachlorophenol ; 4-chloroaniline ; di-2-ethylhexylphthalate ; 1,4-dichlorobenzene ; hexachloroethane ; hydrazobenzene ; diethylnitrosoamine), 6.1, III

UN-No.(DOT) : UN2810

Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.
dichloromethane ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; 2,3,4,5,6-pentachlorophenol ; 4-chloroaniline ; di-2-ethylhexylphthalate ; 1,4-dichlorobenzene ; hexachloroethane ; hydrazobenzene ; diethylnitrosoamine

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Special Provisions (49 CFR 172.102) : 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 liquids 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).
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 153

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

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"

Emergency Response Guide (ERG) Number : 153

Other information : No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

Transport document description (IMDG)	: UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (dichloromethane ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; 2,3,4,5,6-pentachlorophenol ; 4-chloroaniline ; di-2-ethylhexylphthalate ; 1,4-dichlorobenzene ; hexachloroethane ; hydrazobenzene ; diethylnitrosoamine), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
UN-No. (IMDG)	: 2810
Proper Shipping Name (IMDG)	: TOXIC LIQUID, ORGANIC, N.O.S.
Class (IMDG)	: 6.1 - Toxic substances
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L

Air transport

Transport document description (IATA)	: UN 2810 Toxic liquid, organic, n.o.s. (dichloromethane ; 4-chloro-3-methylphenol ; 4,6-dinitro-o-cresol ; 2,3,4,5,6-pentachlorophenol ; 4-chloroaniline ; di-2-ethylhexylphthalate ; 1,4-dichlorobenzene ; hexachloroethane ; hydrazobenzene ; diethylnitrosoamine), 6.1, III, ENVIRONMENTALLY HAZARDOUS
UN-No. (IATA)	: 2810
Proper Shipping Name (IATA)	: Toxic liquid, organic, n.o.s.
Class (IATA)	: 6.1 - Toxic Substances
Packing group (IATA)	: III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Bis(2-ethylhexyl) phthalate (117-81-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	100 lb
-----------	--------

4-chloroaniline (106-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	1000 lb
-----------	---------

4-chloro-3-methylphenol (59-50-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ	5000 lb
-----------	---------

1,4-dichlorobenzene (106-46-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	100 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

4,6-Dinitro-2-methylphenol (534-52-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
Not subject to reporting requirements of the United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	10 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	10000 lb 10lb if the substance is solid in powder form with particle size less than 100 microns, or is in solution or molten form

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

hydrazobenzene (122-66-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
hexachloroethane (67-72-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.
CERCLA RQ	100 lb
isophorone (78-59-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb
N-Nitrosodiethylamine (55-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 lb
2,3,4,5,6-pentachlorophenol (87-86-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb
Methylene Chloride (75-09-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

Bis(2-ethylhexyl) phthalate (117-81-7)	
Listed on the Canadian DSL (Domestic Substances List)	
4-chloroaniline (106-47-8)	
Listed on the Canadian DSL (Domestic Substances List)	
4-chloro-3-methylphenol (59-50-7)	
Listed on the Canadian DSL (Domestic Substances List)	
1,4-dichlorobenzene (106-46-7)	
Listed on the Canadian DSL (Domestic Substances List)	
4,6-Dinitro-2-methylphenol (534-52-1)	
Listed on the Canadian DSL (Domestic Substances List)	
hydrazobenzene (122-66-7)	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
hexachloroethane (67-72-1)	
Listed on the Canadian DSL (Domestic Substances List)	
isophorone (78-59-1)	
Listed on the Canadian DSL (Domestic Substances List)	
N-Nitrosodiethylamine (55-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2,3,4,5,6-pentachlorophenol (87-86-5)

Listed on the Canadian DSL (Domestic Substances List)

Methylene Chloride (75-09-2)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Bis(2-ethylhexyl) phthalate (117-81-7)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

4-chloroaniline (106-47-8)

Listed on IARC (International Agency for Research on Cancer)

1,4-dichlorobenzene (106-46-7)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

4,6-Dinitro-2-methylphenol (534-52-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

hydrazobenzene (122-66-7)

Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

hexachloroethane (67-72-1)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

isophorone (78-59-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

N-Nitrosodiethylamine (55-18-5)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

2,3,4,5,6-pentachlorophenol (87-86-5)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

Methylene Chloride (75-09-2)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on EPA Hazardous Air Pollutant (HAPS)

15.3. US State regulations

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Bis(2-ethylhexyl) phthalate (117-81-7)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	Yes	No	Yes	310 µg/day	4200 µg/day (intravenous), Adult; 600 µg/day (intravenous), Infant boys, age 29 days - 24 mos; 210 µg/day (intravenous), Neonatal infant boys, age 0 - 28 days; 410 µg/day (oral), Adult; 58 µg/day (oral), Infant boys, age 29 days - 24 mos; 20 µg/day (oral), Neonatal infant boys, age 0 - 28 days
4-chloroaniline (106-47-8)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	1.5 µg/day	
1,4-dichlorobenzene (106-46-7)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	20 µg/day	
hydrazobenzene (122-66-7)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.8 µg/day	
hexachloroethane (67-72-1)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	20 µg/day	
N-Nitrosodiethylamine (55-18-5)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.02 µg/day	

Revised 8270 Cal Mix 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2,3,4,5,6-pentachlorophenol (87-86-5)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	40 µg/day	
Methylene Chloride (75-09-2)					
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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	50 µg/day	

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases:

H225	Highly flammable liquid and vapor
H317	May cause an allergic skin reaction
H350	May cause cancer
H360	May damage fertility or the unborn child

Phenova US SDS REV

Copyright 2015 Phenova, Inc. License granted to make paper copies for internal use. The information contained in this Safety Data Sheet is based on our current knowledge. The information contained in this document should be used only as a guide for appropriate safety precautions and should not be considered to be all inclusive. Users should make their own investigation to determine the suitability of the information for their particular purposes. The document does not represent any guarantee of the properties of the product. Phenova, Inc. shall not be held liable for any damage resulting from the handling or use of this product. Visit the Terms and Conditions of Sale link at www.phenova.com for additional terms and conditions of sale.