

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : 8260 IS/Surrogate Mix  
Product code : AL0-130006  
Product group : Trade product

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Laboratory Use  
Industrial/Professional use spec : Industrial  
For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Phenova  
6390 Joyce Dr. Suite 100  
80403 Golden, CO - United States  
T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://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: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Acute Tox. 4 (Oral) H302  
Acute Tox. 4 (Dermal) H312  
Carc. 1B H350  
Aquatic Chronic 3 H412

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.2; R45  
F; R11  
R52/53  
Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

GHS08

Signal word (CLP) : Danger  
Hazardous ingredients : 1,2-Dichloroethane-d4, 2-Fluorophenol  
Hazard statements (CLP) : H225 - Highly flammable liquid and vapor  
H302+H312 - Harmful if swallowed or in contact with skin

# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

Precautionary statements (CLP) : H350 - May cause cancer  
H412 - Harmful to aquatic life with long lasting effects  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P264 - Wash ... thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P403+P235 - Store in a well-ventilated place. Keep cool

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-Fluorophenol (Component)	(CAS No) 367-12-4 (EC no) 206-681-2	96	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332
Chlorobenzene-d5 (Component)	(CAS No) 3114-55-4 (EC no) 203-628-5 (EC index no) 602-033-00-1	0.5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
1,4-Dichlorobenzene-d4 (Component)	(CAS No) 3855-82-1 (EC no) 203-400-5 (EC index no) 602-035-00-2	0.5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,2-Dichloroethane-d4 (Component) substance listed as REACH Candidate (1,2-dichloroethane) substance listed in REACH Annex XIV (1,2-dichloroethane (EDC))	(CAS No) 17060-07-0 (EC no) 203-458-1 (EC index no) 602-012-00-7	0.5	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335
toluene-D8 (Component)	(CAS No) 2037-26-5 (EC no) 218-009-5 (EC index no) 601-021-00-3	0.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304

## 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 victim 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 persist.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

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

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

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.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Chlorobenzene-d5 (3114-55-4)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	75 mppcf
1,4-Dichlorobenzene-d4 (3855-82-1)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	450 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	75 ppm
USA OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	675 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (STEL) (ppm)	110 ppm

### 8.2. Exposure controls

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

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

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.
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
Color	: Colorless.
Odor	: characteristic.
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Relative density	: No data available
Solubility	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion 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

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 : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.

8260 IS/Surrogate Mix	
ATE CLP (oral)	520.833 mg/kg body weight
ATE CLP (dermal)	1145.833 mg/kg body weight
Chlorobenzene-d5 (3114-55-4)	
LD50 oral rat	> 1427 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; >2000 mg/kg bodyweight; Rat)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2200 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	17 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	3630 ppm/4h (Rat)
ATE CLP (gases)	3630.000 ppmV/4h
ATE CLP (vapors)	17.000 mg/l/4h

# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

<b>Chlorobenzene-d5 (3114-55-4)</b>	
ATE CLP (dust, mist)	1.500 mg/l/4h
<b>1,4-Dichlorobenzene-d4 (3855-82-1)</b>	
LD50 oral rat	500 mg/kg
LD50 dermal rat	> 6000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)
ATE CLP (oral)	500.000 mg/kg body weight
<b>1,2-Dichloroethane-d4 (17060-07-0)</b>	
LD50 oral rat	670 mg/kg (Rat)
LD50 dermal rabbit	2800 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (ppm)	1000 ppm
ATE CLP (oral)	670.000 mg/kg body weight
ATE CLP (dermal)	2800.000 mg/kg body weight
<b>toluene-D8 (2037-26-5)</b>	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rat	> 20 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat)
<b>2-Fluorophenol (367-12-4)</b>	
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer. Based on available data, the classification criteria are not met May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Chlorobenzene-d5 (3114-55-4)</b>	
LC50 fish 2	4.7 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.59 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
<b>1,4-Dichlorobenzene-d4 (3855-82-1)</b>	
LC50 fish 2	1.12 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 2	0.7 mg/l (EC50; 48 h)
<b>1,2-Dichloroethane-d4 (17060-07-0)</b>	
LC50 fish 1	225 mg/l (96 h; Oncorhynchus mykiss (rainbow trout))
EC50 Daphnia 1	540 mg/l (24 h; Daphnia magna)

# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

<b>toluene-D8 (2037-26-5)</b>	
LC50 fish 1	24 mg/l (LC50; 96 h)
EC50 Daphnia 2	11.5 - 19.6 mg/l (EC50; 48 h)

### 12.2. Persistence and degradability

<b>8260 IS/Surrogate Mix</b>	
Persistence and degradability	Not established.

<b>Chlorobenzene-d5 (3114-55-4)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.03 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.41 g O <sub>2</sub> /g substance
ThOD	2.06 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.0145

<b>1,4-Dichlorobenzene-d4 (3855-82-1)</b>	
Persistence and degradability	Readily biodegradable in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	1.52 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.65 (Calculated value)

<b>1,2-Dichloroethane-d4 (17060-07-0)</b>	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.0014 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.025 g O <sub>2</sub> /g substance
ThOD	0.98 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.001 (Calculated value)

<b>toluene-D8 (2037-26-5)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	2.15 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.52 g O <sub>2</sub> /g substance
ThOD	3.13 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.69

### 12.3. Bioaccumulative potential

<b>8260 IS/Surrogate Mix</b>	
Bioaccumulative potential	Not established.

<b>Chlorobenzene-d5 (3114-55-4)</b>	
BCF fish 1	447 (BCF)
BCF fish 2	3.9 - 40 (BCF)
Log Pow	2.8 - 2.98
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>1,4-Dichlorobenzene-d4 (3855-82-1)</b>	
BCF fish 1	100 (BCF)
BCF fish 2	214 - 720 (BCF)
BCF other aquatic organisms 1	20 (BCF)
Log Pow	3.39 - 3.62 (Experimental value)

<b>1,2-Dichloroethane-d4 (17060-07-0)</b>	
BCF fish 1	2 (BCF; 336 h)
Log Pow	1.45 - 1.48 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>toluene-D8 (2037-26-5)</b>	
BCF fish 1	13.2 (BCF)
BCF other aquatic organisms 1	380 (BCF; 24 h; Chlorella sp.)
BCF other aquatic organisms 2	4.2 (BCF)
Log Pow	2.11 - 2.8
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

<b>Chlorobenzene-d5 (3114-55-4)</b>	
Surface tension	0.033 N/m (25 °C)

# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

1,4-Dichlorobenzene-d4 (3855-82-1)	
Surface tension	0.030 N/m (55 °C)

1,2-Dichloroethane-d4 (17060-07-0)	
Surface tension	0.032 N/m (20 °C)

### 12.5. Results of PBT and vPvB assessment

Component	
(17060-07-0)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

### 12.6. Other adverse effects

Additional information : Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste 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

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 1992  
UN-No.(IATA) : 1992

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.  
Proper Shipping Name (IATA) : FLAMMABLE LIQUID, TOXIC, N.O.S.  
Transport document description (ADR) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II, (D/E)

### 14.3. Packing group

Class (ADR) : 3  
Classification code (ADR) : FT1  
Class (IATA) : 3  
Subsidiary risks (ADR) : 6.1  
Hazard labels (ADR) : 3, 6.1



Hazard labels (IATA) : 3, 6.1



### 14.4. Packing group

Packing group (ADR) : II  
Packing group (IATA) : II

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 336  
Classification code (ADR) : FT1  
Orange plates :



Special provision (ADR) : 274  
Transport category (ADR) : 2

# 8260 IS/Surrogate Mix

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

Tunnel restriction code (ADR) : D/E  
Limited quantities (ADR) : 1L  
Excepted quantities (ADR) : E2

### 14.6.2. Transport by sea

No additional information available

### 14.6.3. Air transport

CAO packing instructions (IATA) : 364  
CAO max net quantity (IATA) : 60L  
PCA packing instructions (IATA) : 352  
PCA Limited quantities (IATA) : Y341  
PCA limited quantity max net quantity (IATA) : 1L  
PCA max net quantity (IATA) : 1L  
PCA Excepted quantities (IATA) : E2  
ERG code (IATA) : 3HP

### 14.6.4. Inland waterway transport

Carriage prohibited (ADN) : No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains substance on the candidate list in concentration  $\geq 0.1\%$  or with a lower specific limit: 1,2-dichloroethane (EC 203-458-1, CAS 17060-07-0)

Contains REACH Annex XIV substances:

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## 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.

PHV SDS EU

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](http://www.phenova.com) for additional terms and conditions of sale.