



# "EEC SIX" PAH COCKTAIL (D, 98%)

## 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: 16/12/2014

Revision date:

:

Version: 1.0

**ES-2043**

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

#### 1.1. Product identifier

Product form : Mixture  
Product name. : "EEC SIX" PAH COCKTAIL (D, 98%)  
Product code : ES-2043

#### 1.2. Relevant identified uses of 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 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](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

#### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

### 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  
Skin Irrit. 2 H315  
Eye Irrit. 2 H319  
Muta. 1B H340  
Carc. 1A H350  
Asp. Tox. 1 H304  
Aquatic Chronic 3 H412

Full text of H-phrases: see section 16

##### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.1; R45  
Carc.Cat.1; R49  
Muta.Cat.1; R46  
F; R11  
Xn; R22  
Xn; R65  
Xi; R36/38  
N; R51/53

Full text of R-phrases: see section 16

##### GHS-US classification

Flam. Liq. 2 H225  
Skin Irrit. 2 H315  
Eye Irrit. 2A H319  
Muta. 1B H340  
Carc. 1A H350  
Asp. Tox. 1 H304  
Aquatic Chronic 3 H412

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### Adverse physicochemical, human health and environmental effects

Blood, Eyes, Female reproductive system, Bone marrow.

## 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: BENZENE-D6 (D, 99.5%), FLUORANTHENE (D10, 98%), BENZO[K]FLUORANTHENE (D12, 98%)

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H340 - May cause genetic defects  
H350 - May cause cancer  
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof ventilating, lighting, electrical equipment  
P264 - Wash Both hands thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective gloves, protective clothing  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor/...

### GHS-US labelling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H225 - Highly flammable liquid and vapour  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H340 - May cause genetic defects (Dermal, Inhalation, oral)  
H350 - May cause cancer (Dermal, Inhalation, oral)  
H412 - Harmful to aquatic life with long lasting effects

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, open flames, sparks. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P264 - Wash Both hands thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective clothing, protective gloves  
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P331 - If swallowed, do NOT induce vomiting  
P332+P313 - If skin irritation occurs: Get medical advice/attention

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P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide., Dry chemical, Water spray for extinction  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to Comply with applicable regulations.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
BENZENE-D6 (D, 99.5%)	(CAS No) 1076-43-3 (EC no) 200-753-7 (EC index no) 601-020-00-8	99.37	F; R11 Xn; R22 Xi; R36/38 Carc.Cat.1; R45 Muta.Cat.1; R46 Carc.Cat.2; R49 N; R51 Xn; R65
BENZO[B]FLUORANTHENE (D12, 98%)	(CAS No) 205-99-2 (unlabeled) (EC no) 205-911-9 (EC index no) 601-034-00-4	0.1	Carc.Cat.1; R45 Xn; R65 N; R50/53
BENZO[GHI]PERYLENE (D12, 98%) 97% CHEMICAL PURITY	(CAS No) 93951-66-7 (EC no) 205-883-8	0.1	Carc.Cat.1; R45 N; R50/53
FLUORANTHENE (D10, 98%)	(CAS No) 93951-69-0 (EC no) 205-912-4	0.1	Carc.Cat.1; R45 N; R50/53
INDENO[1,2,3-CD]PYRENE (D12, 98%)	(CAS No) 193-39-5 (Unlabeled) (EC no) 205-893-2	0.1	Carc.Cat.3; R40
BENZO[A]PYRENE (D12, 97%)	(CAS No) 63466-71-7 (EC no) 200-028-5 (EC index no) 601-032-00-3	0.1	Carc.Cat.1; R45 Muta.Cat.1; R46 Repr.Cat.1; R61 R42 Xi; R38 N; R50/53
BENZO[K]FLUORANTHENE (D12, 98%)	(CAS No) 93952-01-3 (EC no) 205-916-6 (EC index no) 601-036-00-5	0.1	Carc.Cat.1; R45 Xi; R36/38 N; R50/53

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
BENZENE-D6 (D, 99.5%)	(CAS No) 1076-43-3 (EC no) 200-753-7 (EC index no) 601-020-00-8	99.37	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 Asp. Tox. 1, H304
BENZO[B]FLUORANTHENE (D12, 98%)	(CAS No) 205-99-2 (unlabeled) (EC no) 205-911-9 (EC index no) 601-034-00-4	0.1	Carc. 1A, H350 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
BENZO[GHI]PERYLENE (D12, 98%) 97% CHEMICAL PURITY	(CAS No) 93951-66-7 (EC no) 205-883-8	0.1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
FLUORANTHENE (D10, 98%)	(CAS No) 93951-69-0 (EC no) 205-912-4	0.1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
INDENO[1,2,3-CD]PYRENE (D12, 98%)	(CAS No) 193-39-5 (Unlabeled) (EC no) 205-893-2	0.1	Carc. 2, H351
BENZO[A]PYRENE (D12, 97%)	(CAS No) 63466-71-7 (EC no) 200-028-5 (EC index no) 601-032-00-3	0.1	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
BENZO[K]FLUORANTHENE (D12, 98%)	(CAS No) 93952-01-3 (EC no) 205-916-6 (EC index no) 601-036-00-5	0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1A, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	%	GHS-US classification
BENZENE-D6 (D, 99.5%)	(CAS No) 1076-43-3	99.37	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Muta. 1B, H340 Carc. 1A, H350 Asp. Tox. 1, H304 Aquatic Acute 2, H401
BENZO[B]FLUORANTHENE (D12, 98%)	(CAS No) 205-99-2 (unlabeled)	0.1	Carc. 1B, H350 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
INDENO[1,2,3-CD]PYRENE (D12, 98%)	(CAS No) 193-39-5 (Unlabeled)	0.1	Carc. 2, H351
BENZO[K]FLUORANTHENE (D12, 98%)	(CAS No) 93952-01-3	0.1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 1B, H350 Aquatic Acute 1, H400

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	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Wash with plenty of soap and water. Get medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries	: May cause genetic defects (Inhalation, dermal, oral).
Symptoms/injuries after inhalation	: May cause cancer by inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be fatal if swallowed and enters airways.

### 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 water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
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### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.
Reactivity	: Vapors may form explosive mixture with air.

### 5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
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### 6.1.1. For non-emergency personnel

No additional information available

### 6.1.2. For emergency responders

Protective equipment : Avoid breathing dust, mist or spray.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

No additional information available

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No naked lights. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. In case of leaking gas fire, eliminate all ignition sources if safe to do so.

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 storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Store at room temperature away from light and moisture.

Incompatible materials : Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

BENZENE-D6 (D, 99.5%) (1076-43-3)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.5000000000 ppm Leukemia Substances for which there is a Biological Exposure Index or Indices.
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	2.5000000000 ppm Leukemia Substances for which there is a Biological Exposure Index or Indices.
USA OSHA	OSHA PEL (TWA) (ppm)	10.0000000000 ppm

BENZO[A]PYRENE (D12, 97%) (63466-71-7)		
USA OSHA	OSHA PEL (TWA) (mg/m3)	0.2000000000 mg/m³ Exposure should be carefully controlled to levels as low as possible.

### 8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



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 respiratory protection.

## 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 component of this mixture.

Physical state : Liquid

Appearance : Liquid.

Molecular mass : 84.15 g/mol (labeled)

Colour : Colourless.

Odour : No data available.

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Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 5.5 °C (41.9 °F) - lit
Freezing point	: No data available
Boiling point	: 80 °C (176 °F) - lit
Flash point	: -11.0 °C (12.2 °F) - closed cup
Self ignition temperature	: 562 °C (1,044 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour
Vapour pressure	: 221.3 hPa (166.0 mmHg) at 37.7°C (99.9°F), 99.5 hPa (74.6 mmHg) at 20°C (68°F)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.95 g/ml at 25 °C (77 °F) (labeled)
Solubility	: No data available
Log Pow	: No data available
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	: 1.3 - 8 % (V)

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapors may form explosive mixture with air.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Direct sunlight.

### 10.5. Incompatible materials

Acids, Bases, Halogens, Strong oxidizing agents, Metallic salts.

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

"EEC SIX" PAH COCKTAIL (D, 98%)	
LD50 oral rat	2990 mg/kg
LD50 dermal rabbit	8263 mg/kg
LC50 inhalation rat (mg/l)	44700 mg/m <sup>3</sup> female - 4 h
ATE (oral)	2990.000 mg/kg bodyweight
ATE (dermal)	8263.000 mg/kg bodyweight
ATE (vapours)	44.700 mg/l/4h
ATE (dust,mist)	44.700 mg/l/4h

BENZENE-D6 (D, 99.5%) (1076-43-3)	
LD50 oral rat	2990 mg/kg
LD50 dermal rabbit	8263 mg/kg
LC50 inhalation rat (mg/l)	44700 mg/m <sup>3</sup> female - 4 h
ATE (oral)	2990.000 mg/kg bodyweight
ATE (dermal)	8263.000 mg/kg bodyweight

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BENZENE-D6 (D, 99.5%) (1076-43-3)	
ATE (vapours)	44.700 mg/l/4h
ATE (dust,mist)	44.700 mg/l/4h

BENZO[B]FLUORANTHENE (D12, 98%) (205-99-2 (unlabeled))	
	LD50 Oral Mouse, 7.57 mg/kg

FLUORANTHENE (D10, 98%) (93951-69-0)	
LD50 oral rat	2000 mg/kg
LD50 dermal rabbit	3180 mg/kg
ATE (oral)	2000.000 mg/kg bodyweight
ATE (dermal)	3180.000 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation. Skin - rabbit - Skin irritation
Serious eye damage/irritation	: Causes serious eye irritation. Eyes - rabbit - Eye irritation
Respiratory or skin sensitisation	: Not available No data available
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer.
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified No data available
Specific target organ toxicity (repeated exposure)	: Not classified No data available
Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential Adverse human health effects and symptoms	: Nausea, Dizziness, Headache, Narcosis. Inhalation of high concentrations of benzene may have an initial stimulatory effect on the central nervous system characterized by exhilaration, nervous excitation and/or giddiness, depression, drowsiness, or fatigue. The victim may experience tightness in the chest, breathlessness, and loss of consciousness. Tremors, convulsions and death due to respiratory paralysis or circulatory collapse can occur in a few minutes to several hours following severe exposures. Aspirations of small amounts of liquid immediately causes pulmonary edema and hemorrhage of pulmonary disease. Direct skin contact may cause erythema. Repeated or prolonged skin contact may result in drying, scaling dermatitis or development of secondary skin infections. The chief target organ is the hematopoietic system. Bleeding from the nose, gums, or mucous membranes and the development of purpuric spots, pancytopenia, leukopenia, thrombocytopenia, aplastic anemia and leukemia may occur as the condition progresses. The bone marrow may appear normal, aplastic or hyperplastic and may not correlate with peripheral blood-forming tissues. The onset of effects of prolonged benzene exposure may be delayed for months or years after the actual exposure has ceased. Blood disorders.
IARC group	: 1
Symptoms/injuries after inhalation	: May cause cancer by inhalation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be fatal if swallowed and enters airways.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water	: Harmful to aquatic life with long lasting effects.
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"EEC SIX" PAH COCKTAIL (D, 98%)	
LC50 fishes 1	5.90 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
LC50 other aquatic organisms 1	230 mg/l Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	22.0 mg/l Daphnia magna (Water flea) - 48 h
LC50 fish 2	15 - 32 mg/l Pimephales promelas (Fathead minnow) - 96 h
LC50 other aquatic organisms 2	9.2 mg/l Daphnia magna (Water flea) - 48 h
ErC50 (algae)	29.0 mg/l Pseudokirchneriella subcapitata (Green algae) - 72 h
LOEC (acute)	17.2 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	10.2 mg/l Pimephales promelas (Fathead minnow) - 7 d



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BENZENE-D6 (D, 99.5%) (1076-43-3)	
LC50 fishes 1	5.90 mg/l Oncorhynchus mykiss (Rainbow trout) - 96 h
LC50 other aquatic organisms 1	230 mg/l Lepomis macrochirus (Bluegill) - 96 h
EC50 Daphnia 1	22.0 mg/l Daphnia magna (Water flea) - 48 h
LC50 fish 2	15 - 32 mg/l Pimephales promelas (Fathead minnow) - 96 h
LC50 other aquatic organisms 2	9.2 mg/l Daphnia magna (Water flea) - 48 h
ErC50 (algae)	29.0 mg/l Pseudokirchneriella subcapitata (Green algae) - 72 h
LOEC (acute)	17.2 mg/l Pimephales promelas (Fathead minnow) - 7 d
NOEC (chronic)	10.2 mg/l Pimephales promelas (Fathead minnow) - 7 d

BENZO[B]FLUORANTHENE (D12, 98%) (205-99-2 (unlabeled))	
EC50 Daphnia 1	> 1.024 mg/l Daphnia magna (Water flea) - 24 h

FLUORANTHENE (D10, 98%) (93951-69-0)	
LC50 fishes 1	0.0077 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h

BENZO[A]PYRENE (D12, 97%) (63466-71-7)	
EC50 Daphnia 1	0.25 mg/l Daphnia magna (Water flea) - 48 h
ErC50 (algae)	0.02 mg/l Pseudokirchneriella subcapitata (green algae) - 48 h

### 12.2. Persistence and degradability

"EEC SIX" PAH COCKTAIL (D, 98%)	
Persistence and degradability	May cause long-term adverse effects in the environment.

BENZENE-D6 (D, 99.5%) (1076-43-3)	
Persistence and degradability	Readily biodegradable.

### 12.3. Bioaccumulative potential

BENZO[GHI]PERYLENE (D12, 98%) 97% CHEMICAL PURITY (93951-66-7)	
Log Pow	6.63

BENZO[A]PYRENE (D12, 97%) (63466-71-7)	
Log Pow	5.97
Bioaccumulative potential	Bioaccumulation: Lepomis macrochirus (Bluegill) - 48h. Bioconcentration factor (BCF): 3,208.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other adverse effects : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Waste disposal recommendations	: Dispose of contents/container to Comply with applicable regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials	: Hazardous waste due to toxicity.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

UN-No.(DOT)	: 1114
DOT NA no.	UN1114

### 14.2. UN proper shipping name

DOT Proper Shipping Name	: Benzene
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120



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Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium Danger

DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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.  
T4 - 2.65 178.274(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.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

### 14.3. Additional information

Other information : No supplementary information available.

#### Overland transport

Packing group (ADR) : II

Class (ADR) : 3 - Flammable liquids

Hazard identification number (Kemler No.) : 33

Classification code (ADR) : F1

Danger labels (ADR) : 3 - Flammable liquids



Orange plates



Tunnel restriction code : D/E

Limited quantities (ADR) : 1L

EAC code : 3WE

APP code : A(fl)

Excepted quantities (ADR) : E2

#### Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

MFAG-No : 130

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

Civil Aeronautics Law : Flammable liquids(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)

# "EEC SIX" PAH COCKTAIL (D, 98%) ES-2043

## 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

### 14.4. Environmental hazards

Dangerous for the environment

:



Other information

: No supplementary information available.

### 14.5. Special precautions for user

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### "EEC SIX" PAH COCKTAIL (D, 98%)

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes

Fire hazard  
Immediate (acute) health hazard  
Delayed (chronic) health hazard

#### BENZENE-D6 (D, 99.5%) (1076-43-3)

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes

Fire hazard  
Immediate (acute) health hazard  
Delayed (chronic) health hazard

#### INDENO[1,2,3-CD]PYRENE (D12, 98%) (193-39-5 (Unlabeled))

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes

Delayed (chronic) health hazard

#### BENZO[K]FLUORANTHENE (D12, 98%) (93952-01-3)

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard  
Delayed (chronic) health hazard

#### BENZO[B]FLUORANTHENE (D12, 98%) (205-99-2 (unlabeled))

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 311/312 Hazard Classes

Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

#### "EEC SIX" PAH COCKTAIL (D, 98%)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### BENZENE-D6 (D, 99.5%) (1076-43-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### INDENO[1,2,3-CD]PYRENE (D12, 98%) (193-39-5 (Unlabeled))

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### BENZO[K]FLUORANTHENE (D12, 98%) (93952-01-3)

Not listed on the Canadian DSL (Domestic Substances List) inventory.

#### BENZO[B]FLUORANTHENE (D12, 98%) (205-99-2 (unlabeled))

Not listed on the Canadian DSL (Domestic Substances List) inventory.

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### "EEC SIX" PAH COCKTAIL (D, 98%)(I)

State or local regulations

U.S. - Massachusetts - Right To Know List

# "EEC SIX" PAH COCKTAIL (D, 98%) ES-2043

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

"EEC SIX" PAH COCKTAIL (D, 98%)(I)	
	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.
BENZENE-D6 (D, 99.5%) (1076-43-3)	
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.	
INDENO[1,2,3-CD]PYRENE (D12, 98%) (193-39-5 (Unlabeled))	
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.	
BENZO[K]FLUORANTHENE (D12, 98%) (93952-01-3)	
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.	
BENZO[B]FLUORANTHENE (D12, 98%) (205-99-2 (unlabeled))	
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.	

## 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 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Muta. 1B	Germ cell mutagenicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
R11	Highly flammable

# "EEC SIX" PAH COCKTAIL (D, 98%) ES-2043

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

R22	Harmful if swallowed
R36/38	Irritating to eyes and skin
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R42	May cause sensitization by inhalation
R45	May cause cancer
R46	May cause heritable genetic damage
R49	May cause cancer by inhalation
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51	Toxic to aquatic organisms
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R61	May cause harm to the unborn child
R65	Harmful: may cause lung damage if swallowed
F	Highly flammable
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

### NFPA health hazard

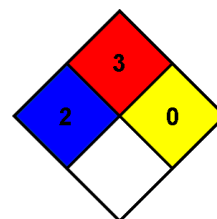
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

### NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

### NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

#### Health

: 2 Moderate Hazard - Temporary or minor injury may occur

#### Flammability

: 3 Serious 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*