

1 Identification

- **Product identifier**
- **Product Name:** Semi-volatile Organics Mix
- **Part Number:** 76-BIG-MIX
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA
- **Information department:** product safety department
- **Emergency telephone number:**
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 1A H360 May damage fertility or the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

dichloromethane

1,2-dinitrobenzene

acenaphthylene

nitrobenzene

DNOC

chlorocresol

4-Bromodiphenyl ether

4-chloroaniline

aniline

benzo[a]pyrene

- **Hazard statements**

H225 Highly flammable liquid and vapor.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H317 May cause an allergic skin reaction.

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H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.

Precautionary statements

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:**NFPA ratings (scale 0 - 4)****HMIS-ratings (scale 0 - 4)****Other hazards****Results of PBT and vPvB assessment****PBT:**

87-68-3	hexachlorobuta-1,3-diene
120-82-1	1,2,4-trichlorobenzene
120-12-7	anthracene

vPvB:

87-68-3	hexachlorobuta-1,3-diene
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3 Composition/information on ingredients**Chemical characterization: Mixtures**

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

75-09-2	dichloromethane	92.5%
87-68-3	hexachlorobuta-1,3-diene	0.1%
67-72-1	hexachloroethane	0.1%
193-39-5	indeno[1,2,3-cd]pyrene	0.1%
78-59-1	3,5,5-trimethylcyclohex-2-enone	0.1%
120-82-1	1,2,4-trichlorobenzene	0.1%
106-46-7	1,4-dichlorobenzene	0.1%
58-90-2	2,3,4,6-tetrachlorophenol	0.1%
95-95-4	2,4,5-trichlorophenol	0.1%
88-06-2	2,4,6-trichlorophenol	0.1%
120-83-2	2,4-dichlorophenol	0.1%
606-20-2	2,6-dinitrotoluene	0.1%
121-14-2	2,4-dinitrotoluene	0.1%
95-57-8	2-chlorophenol	0.1%
534-52-1	DNOC	0.1%
59-50-7	chlorocresol	0.1%
101-55-3	4-Bromodiphenyl ether	0.1%
106-47-8	4-chloroaniline	0.1%
120-12-7	anthracene	0.1%
62-53-3	aniline	0.1%

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103-33-3	azobenzene	0.1%
207-08-9	benzo[k]fluoranthene	0.1%
191-24-2	Benzo(g,h,i)perylene	0.1%
111-44-4	bis(2-chloroethyl) ether	0.1%
56-55-3	benz[a]anthracene	0.1%
50-32-8	benzo[a]pyrene	0.1%
205-99-2	benz[e]acephenanthrylene	0.1%
117-81-7	bis(2-ethylhexyl) phthalate	0.1%
62-75-9	dimethylnitrosoamine	0.1%
621-64-7	nitrosodipropylamine	0.1%
86-74-8	carbazole	0.1%
85-68-7	BBP	0.1%
98-95-3	nitrobenzene	0.1%
91-20-3	naphthalene	0.1%
218-01-9	chrysene	0.1%
87-86-5	pentachlorophenol	0.1%
53-70-3	dibenz[a,h]anthracene	0.1%
117-84-0	Di-n-octyl Phthalate	0.1%
84-74-2	dibutyl phthalate	0.1%
118-74-1	hexachlorobenzene	0.1%

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206-44-0	fluoranthene	0.1%
86-73-7	fluorene	0.1%
77-47-4	hexachlorocyclopentadiene	0.1%
95-50-1	1,2-dichlorobenzene	0.1%
528-29-0	1,2-dinitrobenzene	0.1%
100-25-4	1,4-dinitrobenzene	0.1%
541-73-1	1,3-dichlorobenzene	0.1%
99-65-0	1,3-dinitrobenzene	0.1%
90-12-0	1-methylnaphthalene	0.1%
935-95-5	2,3,5,6-Tetrachlorophenol	0.1%
105-67-9	2,4-xylenol	0.1%
51-28-5	2,4-dinitrophenol	0.1%
91-58-7	2-Chloronaphthalene	0.1%
99-09-2	m-nitroaniline	0.1%
95-48-7	o-cresol	0.1%
88-74-4	o-nitroaniline	0.1%
88-75-5	2-nitrophenol	0.1%
91-57-6	2-methylnaphthalene	0.1%
7005-72-3	4-Chlorophenyl-phenyl ether	0.1%
100-02-7	4-nitrophenol	0.1%
83-32-9	acenaphthene	0.1%
100-01-6	p-nitroaniline	0.1%
208-96-8	acenaphthylene	0.1%
111-91-1	bis(2-chloroethoxy)methane	0.1%
100-51-6	Benzyl alcohol	0.1%
108-60-1	bis(2-chloro-1-methylethyl) ether	0.1%
103-23-1	Di-(2-ethylhexyl) adipate	0.1%
108-95-2	phenol	0.1%
85-01-8	phenanthrene, pure	0.1%
110-86-1	PYRIDINE	0.1%
129-00-0	pyrene	0.1%
132-64-9	dibenzofuran	0.1%
84-66-2	diethyl phthalate	0.1%
122-39-4	diphenylamine	0.1%

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131-11-3	dimethyl phthalate	0.1%
106-44-5	p-cresol	0.05%
108-39-4	3-Methylphenol	0.05%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

- **After inhalation:**

Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Do not induce vomiting; immediately call for medical help.
Do not give anything to eat or drink - Do not induce vomiting

- **Information for Doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:**

Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

· PAC-1:		
75-09-2	dichloromethane	200 ppm
206-44-0	fluoranthene	8.2 mg/m ³
86-73-7	fluorene	6.6 mg/m ³
87-68-3	hexachlorobuta-1,3-diene	1 ppm
77-47-4	hexachlorocyclopentadiene	0.03 ppm
67-72-1	hexachloroethane	3 ppm
193-39-5	indeno[1,2,3-cd]pyrene	1.2 mg/m ³
78-59-1	3,5,5-trimethylcyclohex-2-enone	12 ppm
120-82-1	1,2,4-trichlorobenzene	0.45 ppm
95-50-1	1,2-dichlorobenzene	50 ppm
106-46-7	1,4-dichlorobenzene	30 ppm
541-73-1	1,3-dichlorobenzene	6 ppm
99-65-0	1,3-dinitrobenzene	3 mg/m ³

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90-12-0	1-methylnaphthalene	20 mg/m ³
95-95-4	2,4,5-trichlorophenol	2.5 mg/m ³
88-06-2	2,4,6-trichlorophenol	2.5 mg/m ³
105-67-9	2,4-xylenol	6.9 mg/m ³
51-28-5	2,4-dinitrophenol	0.61 mg/m ³
120-83-2	2,4-dichlorophenol	0.2 ppm
606-20-2	2,6-dinitrotoluene	0.6 mg/m ³
121-14-2	2,4-dinitrotoluene	0.6 mg/m ³
91-58-7	2-Chloronaphthalene	6.2 mg/m ³
95-57-8	2-chlorophenol	2.3 mg/m ³
99-09-2	m-nitroaniline	1.6 mg/m ³
534-52-1	DNOC	0.6 mg/m ³
88-74-4	o-nitroaniline	6.2 mg/m ³
88-75-5	2-nitrophenol	2.1 mg/m ³
91-57-6	2-methylnaphthalene	9 mg/m ³
59-50-7	chlorocresol	5.5 mg/m ³
101-55-3	4-Bromodiphenyl ether	0.33 mg/m ³

· PAC-2:

75-09-2	dichloromethane	560 ppm
206-44-0	fluoranthene	90 mg/m ³
86-73-7	fluorene	72 mg/m ³
87-68-3	hexachlorobuta-1,3-diene	3 ppm
77-47-4	hexachlorocyclopentadiene	0.55 ppm
67-72-1	hexachloroethane	36 ppm
193-39-5	indeno[1,2,3-cd]pyrene	13 mg/m ³
78-59-1	3,5,5-trimethylcyclohex-2-enone	33 ppm
120-82-1	1,2,4-trichlorobenzene	5 ppm
95-50-1	1,2-dichlorobenzene	170 ppm
106-46-7	1,4-dichlorobenzene	170 ppm
541-73-1	1,3-dichlorobenzene	66 ppm
99-65-0	1,3-dinitrobenzene	33 mg/m ³
90-12-0	1-methylnaphthalene	61 mg/m ³
95-95-4	2,4,5-trichlorophenol	27 mg/m ³
88-06-2	2,4,6-trichlorophenol	27 mg/m ³
105-67-9	2,4-xylenol	76 mg/m ³
51-28-5	2,4-dinitrophenol	6.8 mg/m ³
120-83-2	2,4-dichlorophenol	2 ppm
606-20-2	2,6-dinitrotoluene	47 mg/m ³
121-14-2	2,4-dinitrotoluene	12 mg/m ³
91-58-7	2-Chloronaphthalene	69 mg/m ³
95-57-8	2-chlorophenol	25 mg/m ³
99-09-2	m-nitroaniline	18 mg/m ³
534-52-1	DNOC	0.83 mg/m ³
88-74-4	o-nitroaniline	68 mg/m ³
88-75-5	2-nitrophenol	23 mg/m ³
91-57-6	2-methylnaphthalene	54 mg/m ³
59-50-7	chlorocresol	60 mg/m ³
101-55-3	4-Bromodiphenyl ether	3.6 mg/m ³

· PAC-3:

75-09-2	dichloromethane	6,900 ppm
206-44-0	fluoranthene	400 mg/m ³
86-73-7	fluorene	430 mg/m ³
87-68-3	hexachlorobuta-1,3-diene	10 ppm
77-47-4	hexachlorocyclopentadiene	1 ppm
67-72-1	hexachloroethane	300 ppm

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193-39-5	indeno[1,2,3-cd]pyrene	79 mg/m ³
78-59-1	3,5,5-trimethylcyclohex-2-enone	200 ppm
120-82-1	1,2,4-trichlorobenzene	20 ppm
95-50-1	1,2-dichlorobenzene	1,000 ppm
106-46-7	1,4-dichlorobenzene	1,000 ppm
541-73-1	1,3-dichlorobenzene	400 ppm
99-65-0	1,3-dinitrobenzene	200 mg/m ³
90-12-0	1-methylnaphthalene	360 mg/m ³
95-95-4	2,4,5-trichlorophenol	160 mg/m ³
88-06-2	2,4,6-trichlorophenol	160 mg/m ³
105-67-9	2,4-xylenol	460 mg/m ³
51-28-5	2,4-dinitrophenol	16 mg/m ³
120-83-2	2,4-dichlorophenol	20 ppm
606-20-2	2,6-dinitrotoluene	200 mg/m ³
121-14-2	2,4-dinitrotoluene	200 mg/m ³
91-58-7	2-Chloronaphthalene	410 mg/m ³
95-57-8	2-chlorophenol	150 mg/m ³
99-09-2	m-nitroaniline	110 mg/m ³
534-52-1	DNOC	5 mg/m ³
88-74-4	o-nitroaniline	410 mg/m ³
88-75-5	2-nitrophenol	140 mg/m ³
91-57-6	2-methylnaphthalene	320 mg/m ³
59-50-7	chlorocresol	360 mg/m ³
101-55-3	4-Bromodiphenyl ether	21 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

75-09-2 dichloromethane	
PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL	See Pocket Guide App. A
TLV	Long-term value: 174 mg/m ³ , 50 ppm BEI
87-68-3 hexachlorobuta-1,3-diene	
REL	Long-term value: 0.24 mg/m ³ , 0.02 ppm Skin; See Pocket Guide App. A

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TLV	Long-term value: 0.21 mg/m ³ , 0.02 ppm Skin
67-72-1 hexachloroethane	
PEL	Long-term value: 10 mg/m ³ , 1 ppm Skin
REL	Long-term value: 10 mg/m ³ , 1 ppm Skin; See Pocket Guide Apps. A and C
TLV	Long-term value: 9.7 mg/m ³ , 1 ppm Skin
78-59-1 3,5,5-trimethylcyclohex-2-enone	
PEL	Long-term value: 140 mg/m ³ , 25 ppm
REL	Long-term value: 23 mg/m ³ , 4 ppm
TLV	Ceiling limit value: 28 mg/m ³ , 5 ppm
120-82-1 1,2,4-trichlorobenzene	
REL	Ceiling limit value: 40 mg/m ³ , 5 ppm
TLV	Ceiling limit value: 37 mg/m ³ , 5 ppm
106-46-7 1,4-dichlorobenzene	
PEL	Long-term value: 450 mg/m ³ , 75 ppm
REL	See Pocket Guide App. A
TLV	Long-term value: 60 mg/m ³ , 10 ppm
120-83-2 2,4-dichlorophenol	
WEEL	Long-term value: 1 ppm Skin; Q
534-52-1 DNOC	
PEL	Long-term value: 0.2 mg/m ³ Skin
REL	Long-term value: 0.2 mg/m ³ Skin
TLV	Long-term value: (0.2) NIC-0.2* mg/m ³ *inhalable fraction + vapor; Skin
62-53-3 aniline	
PEL	Long-term value: 19 mg/m ³ , 5 ppm and Homologues; Skin
REL	And Homologues; See Pocket Guide App. A
TLV	Long-term value: 7.6 mg/m ³ , 2 ppm Skin; BEI
111-44-4 bis(2-chloroethyl) ether	
PEL	Ceiling limit value: 90 mg/m ³ , 15 ppm Skin
REL	Short-term value: 60 mg/m ³ , 10 ppm Long-term value: 30 mg/m ³ , 5 ppm Skin; See Pocket Guide App. A
TLV	Short-term value: 58 mg/m ³ , 10 ppm Long-term value: 29 mg/m ³ , 5 ppm Skin
56-55-3 benz[a]anthracene	
TLV	L; BEIp
50-32-8 benzo[a]pyrene	
PEL	Long-term value: 0.2 mg/m ³ see Coal tar pitch volatiles
REL	Long-term value: 0.1 mg/m ³ Coal tar pitch volatile; Pocket Guide Apps. A+C
TLV	L; BEIp
205-99-2 benz[e]acephenanthrylene	
TLV	L; BEIp
117-81-7 bis(2-ethylhexyl) phthalate	
PEL	Long-term value: 5 mg/m ³
REL	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ See Pocket Guide App. A

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TLV	Long-term value: 5 mg/m ³
62-75-9 dimethylnitrosoamine	
PEL	see 29 CFR 1910.1003
REL	See Pocket Guide App. A
TLV	Skin; L
98-95-3 nitrobenzene	
PEL	Long-term value: 5 mg/m ³ , 1 ppm Skin
REL	Long-term value: 5 mg/m ³ , 1 ppm Skin
TLV	Long-term value: 5 mg/m ³ , 1 ppm Skin; BEIm
91-20-3 naphthalene	
PEL	Long-term value: 50 mg/m ³ , 10 ppm
REL	Short-term value: 75 mg/m ³ , 15 ppm Long-term value: 50 mg/m ³ , 10 ppm
TLV	Long-term value: 52 mg/m ³ , 10 ppm Skin; BEI
218-01-9 chrysene	
PEL	Long-term value: 0.2 mg/m ³ see Coal Tar Pitch Volatiles
REL	Long-term value: 0.1* mg/m ³ *Cyclohexane-extrble.fraction;PocketGuide Apps.A+C
TLV	L, BEIp
87-86-5 pentachlorophenol	
PEL	Long-term value: 0.5 mg/m ³ Skin
REL	Long-term value: 0.5 mg/m ³ Skin
TLV	Short-term value: 1* mg/m ³ Long-term value: 0.5* mg/m ³ Skin; BEI,*inhalable fraction+vapor
84-74-2 dibutyl phthalate	
PEL	Long-term value: 5 mg/m ³
REL	Long-term value: 5 mg/m ³
TLV	Long-term value: 5 mg/m ³
118-74-1 hexachlorobenzene	
TLV	Long-term value: 0.002 mg/m ³ Skin
· Ingredients with biological limit values:	
75-09-2 dichloromethane	
BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)
62-53-3 aniline	
BEI	50 mg/L Medium: urine Time: end of shift Parameter: p-Aminophenol with hydrolysis (background, nonspecific, semi-quantitative)
-	Medium: urine Time: end of shift Parameter: Aniline with hydrolysis (nonquantitative)
-	Medium: blood Time: end of shift Parameter: Aniline released from hemoglobin (nonquantitative)

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56-55-3 benz[a]anthracene	
BEI -	Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
50-32-8 benzo[a]pyrene	
BEI -	Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
205-99-2 benz[e]acephenanthrylene	
BEI -	Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
98-95-3 nitrobenzene	
BEI	5 mg/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Total p-nitrophenol (nonspecific)
	1.5 % of hemoglobin Medium: blood Time: end of shift Parameter: Methemoglobin (background, nonspecific, semi-quantitative)
218-01-9 chrysene	
BEI -	Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
87-86-5 pentachlorophenol	
BEI	2 mg/g creatinine Medium: urine Time: prior to last shift of workweek Parameter: Total pentachlorophenol (background)
	5 mg/L Medium: plasma Time: end of shift Parameter: Free pentachlorophenol (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid
Color: According to product specification

· **Odor:** Characteristic

· **Odour Threshold:** Not applicable.

· **pH-value:** Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 40 °C (104 °F)

· **Flash point:** < 0 °C (<32 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 605 °C (1,121 °F)

· **Decomposition temperature:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower: 13 Vol %

Upper: 22 Vol %

· **Vapor pressure at 20 °C (68 °F):** 453 hPa (339.8 mm Hg)

· **Density** Not applicable.

· **Relative density** Not applicable.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not applicable.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Solvent content:

Organic solvents: 93.3 %

VOC content: 0.75 %

Solids content: 4.4 %

· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

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Product Name: Semi-volatile Organics Mix

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· **Hazardous decomposition products:** No dangerous decomposition products known.**11 Toxicological information**· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

75-09-2 dichloromethane		
Oral	LD50	1,600 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/l (rat)
77-47-4 hexachlorocyclopentadiene		
Oral	LD50	1,300 mg/kg (rat)
Dermal	LD50	430 mg/kg (rabbit)
99-65-0 1,3-dinitrobenzene		
Oral	LD50	83 mg/kg (rat)
606-20-2 2,6-dinitrotoluene		
Oral	LD50	177 mg/kg (rat)
121-14-2 2,4-dinitrotoluene		
Oral	LD50	268 mg/kg (rat)
534-52-1 DNOC		
Oral	LD50	10 mg/kg (rat)
Dermal	LD50	1,000 mg/kg (rabbit)
106-47-8 4-chloroaniline		
Oral	LD50	310 mg/kg (rat)
Dermal	LD50	3,200 mg/kg (rat)
62-53-3 aniline		
Oral	LD50	250 mg/kg (rat)
Dermal	LD50	820 mg/kg (rabbit)
Inhalative	LC50/4 h	175 mg/l (mouse)
103-33-3 azobenzene		
Oral	LD50	1,000 mg/kg (rat)
111-44-4 bis(2-chloroethyl) ether		
Oral	LD50	75 mg/kg (rat)
Dermal	LD50	90 mg/kg (rabbit)
Inhalative	LC50/4 h	0.33 mg/l (rat)
87-86-5 pentachlorophenol		
Oral	LD50	27 mg/kg (rat)
Dermal	LD50	105 mg/kg (rat)

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritating effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Carcinogenic.

The product can cause inheritable damage.

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
75-09-2	dichloromethane	2A
206-44-0	fluoranthene	3
86-73-7	fluorene	3
87-68-3	hexachlorobuta-1,3-diene	3
67-72-1	hexachloroethane	2B
193-39-5	indeno[1,2,3-cd]pyrene	2B
95-50-1	1,2-dichlorobenzene	3
106-46-7	1,4-dichlorobenzene	2B

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541-73-1	1,3-dichlorobenzene	3
58-90-2	2,3,4,6-tetrachlorophenol	2B
95-95-4	2,4,5-trichlorophenol	2B
88-06-2	2,4,6-trichlorophenol	2B
120-83-2	2,4-dichlorophenol	2B
606-20-2	2,6-dinitrotoluene	2B
121-14-2	2,4-dinitrotoluene	2B
95-57-8	2-chlorophenol	2B
106-47-8	4-chloroaniline	2B
83-32-9	acenaphthene	3
120-12-7	anthracene	3
62-53-3	aniline	3
103-33-3	azobenzene	3
207-08-9	benzo[k]fluoranthene	2B
191-24-2	Benzo(g,h,i)perylene	3
111-44-4	bis(2-chloroethyl) ether	3
56-55-3	benz[a]anthracene	2B
50-32-8	benzo[a]pyrene	1
205-99-2	benz[e]acephenanthrylene	2B
117-81-7	bis(2-ethylhexyl) phthalate	2B
108-60-1	bis(2-chloro-1-methylethyl) ether	3
103-23-1	Di-(2-ethylhexyl) adipate	3

· NTP (National Toxicology Program)

75-09-2	dichloromethane	R
206-44-0	fluoranthene	R
86-73-7	fluorene	R
67-72-1	hexachloroethane	R
193-39-5	indeno[1,2,3-cd]pyrene	R
106-46-7	1,4-dichlorobenzene	R
88-06-2	2,4,6-trichlorophenol	R
120-12-7	anthracene	R
207-08-9	benzo[k]fluoranthene	R
56-55-3	benz[a]anthracene	R
50-32-8	benzo[a]pyrene	R
205-99-2	benz[e]acephenanthrylene	R
117-81-7	bis(2-ethylhexyl) phthalate	R
62-75-9	dimethylnitrosoamine	R
621-64-7	nitrosodipropylamine	R
98-95-3	nitrobenzene	R
91-20-3	naphthalene	R
218-01-9	chrysene	R
85-01-8	phenanthrene, pure	R
87-86-5	pentachlorophenol	R
129-00-0	pyrene	R
53-70-3	dibenz[a,h]anthracene	R
118-74-1	hexachlorobenzene	R

· OSHA-Ca (Occupational Safety & Health Administration)

75-09-2	dichloromethane	
62-53-3	aniline	
62-75-9	dimethylnitrosoamine	

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**

· **PBT:**

87-68-3	hexachlorobuta-1,3-diene
120-82-1	1,2,4-trichlorobenzene
120-12-7	anthracene

· **vPvB:**




87-68-3	hexachlorobuta-1,3-diene
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- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1593
- **UN proper shipping name**
- **DOT** Dichloromethane
- **ADR** 1593 Dichloromethane, ENVIRONMENTALLY HAZARDOUS
- **IMDG** DICHLOROMETHANE, MARINE POLLUTANT
- **IATA** DICHLOROMETHANE
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 6.1 Toxic substances
- **Label** 6.1
- **ADR, IMDG**
- 
- **Class** 6.1 Toxic substances
- **Label** 6.1
- **IATA**
- 
- **Class** 6.1 Toxic substances

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· Label	6.1
· Packing group · DOT, ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant: · Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
· Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups	Warning: Toxic substances 60 F-A,S-A Liquid halogenated hydrocarbons
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1593 DICHLOROMETHANE, 6.1, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 313 (Specific toxic chemical listings):	
75-09-2	dichloromethane
206-44-0	fluoranthene
87-68-3	hexachlorobuta-1,3-diene
77-47-4	hexachlorocyclopentadiene
67-72-1	hexachloroethane
193-39-5	indeno[1,2,3-cd]pyrene
120-82-1	1,2,4-trichlorobenzene
95-50-1	1,2-dichlorobenzene
528-29-0	1,2-dinitrobenzene
106-46-7	1,4-dichlorobenzene
100-25-4	1,4-dinitrobenzene
541-73-1	1,3-dichlorobenzene
99-65-0	1,3-dinitrobenzene
58-90-2	2,3,4,6-tetrachlorophenol
95-95-4	2,4,5-trichlorophenol
88-06-2	2,4,6-trichlorophenol
105-67-9	2,4-xylenol
51-28-5	2,4-dinitrophenol
120-83-2	2,4-dichlorophenol
606-20-2	2,6-dinitrotoluene
121-14-2	2,4-dinitrotoluene
95-57-8	2-chlorophenol
534-52-1	DNOC
95-48-7	o-cresol
88-75-5	2-nitrophenol
106-47-8	4-chloroaniline

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100-02-7	4-nitrophenol
100-01-6	p-nitroaniline
120-12-7	anthracene
62-53-3	aniline

· TSCA (Toxic Substances Control Act):

75-09-2	dichloromethane
206-44-0	fluoranthene
86-73-7	fluorene
87-68-3	hexachlorobuta-1,3-diene
77-47-4	hexachlorocyclopentadiene
67-72-1	hexachloroethane
193-39-5	indeno[1,2,3-cd]pyrene
78-59-1	3,5,5-trimethylcyclohex-2-enone
120-82-1	1,2,4-trichlorobenzene
95-50-1	1,2-dichlorobenzene
106-46-7	1,4-dichlorobenzene
100-25-4	1,4-dinitrobenzene
541-73-1	1,3-dichlorobenzene
99-65-0	1,3-dinitrobenzene
90-12-0	1-methylnaphthalene
58-90-2	2,3,4,6-tetrachlorophenol
95-95-4	2,4,5-trichlorophenol
88-06-2	2,4,6-trichlorophenol
105-67-9	2,4-xylenol
51-28-5	2,4-dinitrophenol
120-83-2	2,4-dichlorophenol
606-20-2	2,6-dinitrotoluene
121-14-2	2,4-dinitrotoluene
91-58-7	2-Chloronaphthalene
95-57-8	2-chlorophenol
99-09-2	m-nitroaniline
534-52-1	DNOC
95-48-7	o-cresol
88-74-4	o-nitroaniline
88-75-5	2-nitrophenol

· TSCA new (21st Century Act) (Substances not listed)

87-68-3	hexachlorobuta-1,3-diene
58-90-2	2,3,4,6-tetrachlorophenol
95-95-4	2,4,5-trichlorophenol
88-06-2	2,4,6-trichlorophenol
95-57-8	2-chlorophenol
534-52-1	DNOC
59-50-7	chlorocresol
101-55-3	4-Bromodiphenyl ether
103-33-3	azobenzene
207-08-9	benzo[k]fluoranthene
191-24-2	Benzo(g,h,i)perylene
56-55-3	benz[a]anthracene
205-99-2	benz[e]acephenanthrylene
62-75-9	dimethylnitrosoamine
621-64-7	nitrosodipropylamine
86-74-8	carbazole

· Proposition 65

· Chemicals known to cause cancer:

75-09-2	dichloromethane
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87-68-3	hexachlorobuta-1,3-diene
67-72-1	hexachloroethane
193-39-5	indeno[1,2,3-cd]pyrene
106-46-7	1,4-dichlorobenzene
88-06-2	2,4,6-trichlorophenol
606-20-2	2,6-dinitrotoluene
121-14-2	2,4-dinitrotoluene
106-47-8	4-chloroaniline
62-53-3	aniline
103-33-3	azobenzene
207-08-9	benzo[k]fluoranthene
111-44-4	bis(2-chloroethyl) ether
56-55-3	benz[a]anthracene
50-32-8	benzo[a]pyrene
205-99-2	benzo[e]acephenanthrylene
117-81-7	bis(2-ethylhexyl) phthalate
108-60-1	bis(2-chloro-1-methylethyl) ether
62-75-9	dimethylnitrosoamine
621-64-7	nitrosodipropylamine
86-74-8	carbazole
98-95-3	nitrobenzene
91-20-3	naphthalene
218-01-9	chrysene
87-86-5	pentachlorophenol
110-86-1	PYRIDINE
53-70-3	dibenz[a,h]anthracene
118-74-1	hexachlorobenzene

· **Chemicals known to cause reproductive toxicity for females:**

84-74-2	dibutyl phthalate
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· **Chemicals known to cause reproductive toxicity for males:**

528-29-0	1,2-dinitrobenzene
100-25-4	1,4-dinitrobenzene
99-65-0	1,3-dinitrobenzene
606-20-2	2,6-dinitrotoluene
121-14-2	2,4-dinitrotoluene
117-81-7	bis(2-ethylhexyl) phthalate
98-95-3	nitrobenzene
84-74-2	dibutyl phthalate

· **Chemicals known to cause developmental toxicity:**

117-81-7	bis(2-ethylhexyl) phthalate
85-68-7	BBP
84-74-2	dibutyl phthalate
118-74-1	hexachlorobenzene

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

75-09-2	dichloromethane	L
206-44-0	fluoranthene	D
86-73-7	fluorene	D
87-68-3	hexachlorobuta-1,3-diene	C
77-47-4	hexachlorocyclopentadiene	E, NL
67-72-1	hexachloroethane	L
193-39-5	indeno[1,2,3-cd]pyrene	B2
78-59-1	3,5,5-trimethylcyclohex-2-enone	C
120-82-1	1,2,4-trichlorobenzene	D
95-50-1	1,2-dichlorobenzene	D

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528-29-0	1,2-dinitrobenzene	D
100-25-4	1,4-dinitrobenzene	D
541-73-1	1,3-dichlorobenzene	D
99-65-0	1,3-dinitrobenzene	D
88-06-2	2,4,6-trichlorophenol	B2
95-48-7	o-cresol	C
91-57-6	2-methylnaphthalene	I
101-55-3	4-Bromodiphenyl ether	D
83-32-9	acenaphthene	A (oral)
208-96-8	acenaphthylene	D
120-12-7	anthracene	D
62-53-3	aniline	B2
103-33-3	azobenzene	B2
207-08-9	benzo[k]fluoranthene	B2
191-24-2	Benzo(g,h,i)perylene	D
111-44-4	bis(2-chloroethyl) ether	B2
111-91-1	bis(2-chloroethoxy)methane	D
56-55-3	benz[a]anthracene	B2
50-32-8	benzo[a]pyrene	CaH
205-99-2	benz[e]acephenanthrylene	B2

· **TLV (Threshold Limit Value established by ACGIH)**

75-09-2	dichloromethane	A3
87-68-3	hexachlorobuta-1,3-diene	A3
77-47-4	hexachlorocyclopentadiene	A4
67-72-1	hexachloroethane	A3
78-59-1	3,5,5-trimethylcyclohex-2-enone	A3
95-50-1	1,2-dichlorobenzene	A4
106-46-7	1,4-dichlorobenzene	A3
90-12-0	1-methylnaphthalene	A4
91-57-6	2-methylnaphthalene	A4
100-01-6	p-nitroaniline	A4
62-53-3	aniline	A3
111-44-4	bis(2-chloroethyl) ether	A4
56-55-3	benz[a]anthracene	A2
50-32-8	benzo[a]pyrene	A2
205-99-2	benz[e]acephenanthrylene	A2
117-81-7	bis(2-ethylhexyl) phthalate	A3
62-75-9	dimethylnitrosoamine	A3
98-95-3	nitrobenzene	A3
91-20-3	naphthalene	A4
218-01-9	chrysene	A3
108-95-2	phenol	A4
87-86-5	pentachlorophenol	A3
84-66-2	diethyl phthalate	A4
122-39-4	diphenylamine	A4
118-74-1	hexachlorobenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

75-09-2	dichloromethane	
87-68-3	hexachlorobuta-1,3-diene	
67-72-1	hexachloroethane	
106-46-7	1,4-dichlorobenzene	
121-14-2	2,4-dinitrotoluene	
62-53-3	aniline	
111-44-4	bis(2-chloroethyl) ether	
50-32-8	benzo[a]pyrene	

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117-81-7	bis(2-ethylhexyl) phthalate
62-75-9	dimethylnitrosoamine
218-01-9	chrysene

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Danger

- **Hazard-determining components of labeling:**

dichloromethane
1,2-dinitrobenzene
acenaphthylene
nitrobenzene
DNOC
chlorocresol
4-Bromodiphenyl ether
4-chloroaniline
aniline
benzo[a]pyrene

- **Hazard statements**

H225 Highly flammable liquid and vapor.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **National regulations:**

- **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** product safety department

- **Contact:**

SPEX CertiPrep, LLC.
1-732-549-7144

- **Date of preparation / last revision** 11/12/2018 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1A: Reproductive toxicity – Category 1A

US