

1 Identification

· **Product identifier**

· **Product Name:** Volatiles Mix for OLM04.1

· **Part Name:** CLPV-43CH

· **Restrictions**

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

· **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
732-549-7144
USMet-CRMSales@antylia.com

· **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

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Toxicity - Inhalation 3

H331 Toxic if inhaled.



GHS08 Health hazard

Germ Cell Mutagenicity 1B

H340 May cause genetic defects.

Carcinogenicity 1A

H350 May cause cancer.

Toxic to Reproduction 1A

H360 May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure 1

H370 Causes damage to the central nervous system and the visual organs.

Specific Target Organ Toxicity - Repeated Exposure 2

H373 May cause damage to the central nervous system, the kidneys and the cardiovascular system through prolonged or repeated exposure.



GHS07

Sensitization - Skin 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



GHS06



GHS07



GHS08

· **Signal word** Danger

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

methanol
benzene
1,2-dibromo-3-chloropropane

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 1)

carbon tetrachloride
(Z)-1,3-dichloropropene

Hazard statements

- H225 Highly flammable liquid and vapor.
- H331 Toxic 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.
- H370 Causes damage to the central nervous system and the visual organs.
- H373 May cause damage to the central nervous system, the kidneys and the cardiovascular system through prolonged or repeated exposure.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P321 Specific treatment (see on this label).
- P363 Wash contaminated clothing before reuse.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 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:	
120-82-1	1,2,4-trichlorobenzene

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

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

Dangerous components:

67-56-1	methanol	91.2%
56-23-5	carbon tetrachloride	0.2%
67-66-3	chloroform	0.2%
71-43-2	benzene	0.2%
71-55-6	1,1,1-trichloroethane	0.2%
75-09-2	dichloromethane	0.2%
75-15-0	carbon disulphide	0.2%
75-25-2	bromoform	0.2%
75-27-4	bromodichloromethane	0.2%
75-35-4	1,1-dichloroethylene	0.2%
78-87-5	propylene dichloride	0.2%
79-00-5	1,1,2-trichloroethane	0.2%
79-01-6	trichloroethylene	0.2%
79-34-5	1,1,2,2-tetrachloroethane	0.2%

(Contd. on page 3)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 2)

96-12-8	1,2-dibromo-3-chloropropane	0.2%
98-82-8	isopropylbenzene	0.2%
100-41-4	ethylbenzene	0.2%
100-42-5	styrene	0.2%
106-46-7	1,4-dichlorobenzene	0.2%
106-93-4	1,2-dibromoethane	0.2%
107-06-2	1,2-dichloroethane	0.2%
108-10-1	4-methylpentan-2-one	0.2%
108-88-3	toluene	0.2%
120-82-1	1,2,4-trichlorobenzene	0.2%
124-48-1	dibromochloromethane	0.2%
127-18-4	tetrachloroethylene	0.2%
591-78-6	hexan-2-one	0.2%
1634-04-4	Methyl-tert-butyl ether	0.2%
10061-01-5	(Z)-1,3-dichloropropene	0.2%
10061-02-6	trans-1,3-Dichloropropene	0.2%

Chemical identification of the substance/preparation

67-64-1	acetone	0.2%
75-34-3	1,1-dichloroethane	0.2%
76-13-1	1,1,2-trichlorotrifluoroethane	0.2%
78-93-3	butanone	0.2%
79-20-9	methyl acetate	0.2%
95-47-6	o-xylene	0.2%
95-50-1	1,2-dichlorobenzene	0.2%
106-42-3	p-xylene	0.2%
108-38-3	m-xylene	0.2%
108-87-2	methylcyclohexane	0.2%
108-90-7	chlorobenzene	0.2%
110-82-7	cyclohexane	0.2%
156-59-2	cis-dichloroethylene	0.2%
156-60-5	trans-dichloroethylene	0.2%
541-73-1	1,3-dichlorobenzene	0.2%

4 First-aid measures

Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
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 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 During heating or in case of fire poisonous gases are produced.

Advice for firefighters

Protective equipment: Mouth respiratory protective device.

(Contd. on page 4)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 3)

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Dilute with plenty of water.

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:**

67-56-1	methanol	530 ppm
56-23-5	carbon tetrachloride	1.2 ppm
67-64-1	acetone	200 ppm
67-66-3	chloroform	2 ppm
71-43-2	benzene	52 ppm
71-55-6	1,1,1-trichloroethane	230 ppm
75-09-2	dichloromethane	200 ppm
75-15-0	carbon disulphide	13 ppm
75-25-2	bromoform	1.5 ppm
75-27-4	bromodichloromethane	1.3 mg/m ³
75-34-3	1,1-dichloroethane	300 ppm
75-35-4	1,1-dichloroethylene	45 ppm
76-13-1	1,1,2-trichlorotrifluoroethane	1,250 ppm
78-87-5	propylene dichloride	30 ppm
78-93-3	butanone	200 ppm
79-00-5	1,1,2-trichloroethane	30 ppm
79-01-6	trichloroethylene	130 ppm
79-20-9	methyl acetate	250 ppm
79-34-5	1,1,2,2-tetrachloroethane	3 ppm
95-50-1	1,2-dichlorobenzene	50 ppm
96-12-8	1,2-dibromo-3-chloropropane	0.003 ppm
98-82-8	isopropylbenzene	50 ppm
100-41-4	ethylbenzene	33 ppm
100-42-5	styrene	20 ppm
106-46-7	1,4-dichlorobenzene	30 ppm
106-93-4	1,2-dibromoethane	17 ppm
107-06-2	1,2-dichloroethane	50 ppm
108-10-1	4-methylpentan-2-one	75 ppm
108-38-3	m-xylene	130 ppm
108-87-2	methylcyclohexane	1200* ppm

· **PAC-2:**

67-56-1	methanol	2,100 ppm
56-23-5	carbon tetrachloride	13 ppm
67-64-1	acetone	3200* ppm
67-66-3	chloroform	64 ppm
71-43-2	benzene	800 ppm
71-55-6	1,1,1-trichloroethane	600 ppm
75-09-2	dichloromethane	560 ppm
75-15-0	carbon disulphide	160 ppm
75-25-2	bromoform	6.8 ppm
75-27-4	bromodichloromethane	14 mg/m ³

(Contd. on page 5)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 4)

75-34-3	1,1-dichloroethane	670 ppm
75-35-4	1,1-dichloroethylene	500 ppm
76-13-1	1,1,2-trichlorotrifluoroethane	3,900 ppm
78-87-5	propylene dichloride	220 ppm
78-93-3	butanone	2700* ppm
79-00-5	1,1,2-trichloroethane	180 ppm
79-01-6	trichloroethylene	450 ppm
79-20-9	methyl acetate	1,700 ppm
79-34-5	1,1,2,2-tetrachloroethane	120 ppm
95-50-1	1,2-dichlorobenzene	170 ppm
96-12-8	1,2-dibromo-3-chloropropane	2.2 ppm
98-82-8	isopropylbenzene	300 ppm
100-41-4	ethylbenzene	1100* ppm
100-42-5	styrene	130 ppm
106-46-7	1,4-dichlorobenzene	170 ppm
106-93-4	1,2-dibromoethane	24 ppm
107-06-2	1,2-dichloroethane	200 ppm
108-10-1	4-methylpentan-2-one	500 ppm
108-38-3	m-xylene	920 ppm
108-87-2	methylcyclohexane	1700* ppm
· PAC-3:		
67-56-1	methanol	7200* ppm
56-23-5	carbon tetrachloride	340 ppm
67-64-1	acetone	5700* ppm
67-66-3	chloroform	3,200 ppm
71-43-2	benzene	4000* ppm
71-55-6	1,1,1-trichloroethane	4,200 ppm
75-09-2	dichloromethane	6,900 ppm
75-15-0	carbon disulphide	480 ppm
75-25-2	bromoform	41 ppm
75-27-4	bromodichloromethane	85 mg/m ³
75-34-3	1,1-dichloroethane	4,000 ppm
75-35-4	1,1-dichloroethylene	1,000 ppm
76-13-1	1,1,2-trichlorotrifluoroethane	4,500 ppm
78-87-5	propylene dichloride	2,000 ppm
78-93-3	butanone	4000* ppm
79-00-5	1,1,2-trichloroethane	500 ppm
79-01-6	trichloroethylene	3,800 ppm
79-20-9	methyl acetate	10000* ppm
79-34-5	1,1,2,2-tetrachloroethane	150 ppm
95-50-1	1,2-dichlorobenzene	1,000 ppm
96-12-8	1,2-dibromo-3-chloropropane	4.3 ppm
98-82-8	isopropylbenzene	730 ppm
100-41-4	ethylbenzene	1800* ppm
100-42-5	styrene	1100* ppm
106-46-7	1,4-dichlorobenzene	1,000 ppm
106-93-4	1,2-dibromoethane	46 ppm
107-06-2	1,2-dichloroethane	300 ppm
108-10-1	4-methylpentan-2-one	3000* ppm
108-38-3	m-xylene	2500* ppm
108-87-2	methylcyclohexane	10000** ppm

7 Handling and storage

· Handling:

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

(Contd. on page 6)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 5)

Prevent formation of aerosols.

Information about protection against explosions and fires:

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities

Storage:

- Requirements to be met by storerooms and receptacles:** Store in a cool location.
- Information about storage in one common storage facility:** Not required.
- Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
- 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.

67-56-1 methanol	
PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 250 ppm Long-term value: 200 ppm Skin; BEI
56-23-5 carbon tetrachloride	
PEL	Long-term value: 10 ppm Ceiling limit value: 25; 200* ppm *5-min peak in any 4 hrs
REL	Short-term value: 12.6* mg/m ³ , 2* ppm *60-min; See Pocket Guide App. A
TLV	Short-term value: 10 ppm Long-term value: 5 ppm Skin, A2
67-66-3 chloroform	
PEL	Ceiling limit value: 240 mg/m ³ , 50 ppm
REL	Short-term value: 9.78* mg/m ³ , 2* ppm *60-min; See Pocket Guide App. A
TLV	Long-term value: 10 ppm A3
71-43-2 benzene	
PEL	Short-term value: 15* mg/m ³ , 5* ppm Long-term value: 3* mg/m ³ , 1* ppm *table Z-2 for exclusions in 29CFR1910.1028(d)
REL	Short-term value: 1 ppm Long-term value: 0.1 ppm See Pocket Guide App. A
TLV	Short-term value: (2.5) NIC-0.1 ppm Long-term value: (0.5) NIC-0.02 ppm Skin; BEI, A1
71-55-6 1,1,1-trichloroethane	
PEL	Long-term value: 1900 mg/m ³ , 350 ppm
REL	Ceiling limit value: 1900* mg/m ³ , 350* ppm *15-min; See Pocket Guide App. C
TLV	Short-term value: 450 ppm Long-term value: 350 ppm BEI, A4
75-09-2 dichloromethane	
PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052

(Contd. on page 7)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 6)

REL	See Pocket Guide App. A
TLV	Long-term value: 50 ppm BEI, A3
75-15-0 carbon disulphide	
PEL	Long-term value: 20 ppm Ceiling limit value: 30; 100* ppm *30-min peak per 8-hr shift
REL	Short-term value: 30 mg/m ³ , 10 ppm Long-term value: 3 mg/m ³ , 1 ppm Skin
TLV	Long-term value: 1 ppm Skin, BEI, A4
75-25-2 bromoform	
PEL	Long-term value: 5 mg/m ³ , 0.5 ppm Skin
REL	Long-term value: 5 mg/m ³ , 0.5 ppm Skin
TLV	Long-term value: 0.5 ppm A3
75-35-4 1,1-dichloroethylene	
REL	See Pocket Guide App.A
TLV	Long-term value: 5 ppm A4
78-87-5 propylene dichloride	
PEL	Long-term value: 350 mg/m ³ , 75 ppm
REL	See Pocket Guide App. A
TLV	Long-term value: 10 ppm DSEN, A4
79-00-5 1,1,2-trichloroethane	
PEL	Long-term value: 45 mg/m ³ , 10 ppm Skin
REL	Long-term value: 45 mg/m ³ , 10 ppm Skin; See Pocket Guide Apps.A and C
TLV	Long-term value: 10 ppm Skin, A3
79-01-6 trichloroethylene	
PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 2 hrs
REL	See Pocket Guide Apps. A and C
TLV	Short-term value: 25 ppm Long-term value: 10 ppm BEI, A2
79-34-5 1,1,2,2-tetrachloroethane	
PEL	Long-term value: 35 mg/m ³ , 5 ppm Skin
REL	Long-term value: 7 mg/m ³ , 1 ppm Skin; See Pocket Guide Apps. A and C
TLV	Long-term value: 1 ppm Skin, A3
96-12-8 1,2-dibromo-3-chloropropane	
PEL	Long-term value: 0.001 ppm see 29 CFR 1910.1044
REL	See Pocket Guide App. A
98-82-8 isopropylbenzene	
PEL	Long-term value: 245 mg/m ³ , 50 ppm Skin
REL	Long-term value: 245 mg/m ³ , 50 ppm Skin
TLV	Long-term value: 5 ppm A3

(Contd. on page 8)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 7)

100-41-4 ethylbenzene	
PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 545 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Long-term value: 20 ppm OTO, BEI, A3
100-42-5 styrene	
PEL	Long-term value: 100 ppm Ceiling limit value: 200; 600* ppm *5-min peak in any 3 hrs
REL	Short-term value: 425 mg/m ³ , 100 ppm Long-term value: 215 mg/m ³ , 50 ppm
TLV	Short-term value: 20 ppm Long-term value: 10 ppm BEI, OTO, A3
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: 10 ppm A3
106-93-4 1,2-dibromoethane	
PEL	Long-term value: 20 ppm Ceiling limit value: 30; 50* ppm *5-min peak per 8-hr shift
REL	Long-term value: 0.045 ppm Ceiling limit value: 0.13* ppm *15-min; See Pocket Guide App. A
TLV	Skin, A3
107-06-2 1,2-dichloroethane	
PEL	Long-term value: 50 ppm Ceiling limit value: 100; 200* ppm *5-min peak in any 3 hrs
REL	Short-term value: 8 mg/m ³ , 2 ppm Long-term value: 4 mg/m ³ , 1 ppm See Pocket Guide Apps. A and C
TLV	Long-term value: 10 ppm A4
108-10-1 4-methylpentan-2-one	
PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 75 ppm Long-term value: 20 ppm BEI, A3
108-88-3 toluene	
PEL	Long-term value: 200 ppm Ceiling limit value: 300; 500* ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	Long-term value: 20 ppm BEI, OTO, A4
120-82-1 1,2,4-trichlorobenzene	
REL	Ceiling limit value: 40 mg/m ³ , 5 ppm
TLV	Ceiling limit value: 5 ppm
127-18-4 tetrachloroethylene	
PEL	Long-term value: 100 ppm Ceiling limit value: 200; 300* ppm *5-min peak in any 3 hrs
REL	Minimize workplace exp. concs.; Pocket Guide App. A
TLV	Short-term value: 100 ppm Long-term value: 25 ppm BEI, A3

(Contd. on page 9)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 8)

591-78-6 hexan-2-one	
PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Long-term value: 4 mg/m ³ , 1 ppm
TLV	Short-term value: 10 ppm Long-term value: 5 ppm Skin
1634-04-4 Methyl-tert-butyl ether	
TLV	Long-term value: 50 ppm A3
Ingredients with biological limit values:	
67-56-1 methanol	
BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
71-43-2 benzene	
BEI	25 µg/g creatinine Medium: urine Time: end of shift Parameter: S-Phenylmercapturic acid (background)
	500 µg/g creatinine Medium: urine Time: end of shift Parameter: t,t-Muconic acid (background)
71-55-6 1,1,1-trichloroethane	
BEI	20 ppm Medium: end-exhaled air Time: prior to shift at end of workweek Parameter: Methyl chloroform
	700 µg/L Medium: urine Time: end of shift Parameter: Methyl chloroform
75-09-2 dichloromethane	
BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)
75-15-0 carbon disulphide	
BEI	0.5 mg/g creatinine Medium: urine Time: end of shift Parameter: 2-Thioxothiazolidine-4-carboxylic acid (background, nonspecific)
79-01-6 trichloroethylene	
BEI	15 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Trichloroacetic acid (nonspecific)
	0.5 mg/L Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethanol without hydrolysis (nonspecific)
	- Medium: blood Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative)
	- Medium: end-exhaled air Time: end of shift at end of workweek Parameter: Trichloroethylene (semi-quantitative)

(Contd. on page 10)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 9)

100-41-4 ethylbenzene	
BEI	0.15 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific)
100-42-5 styrene	
BEI	400 mg/g creatinine Medium: urine Time: end of shift Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)
	40 µg/L Medium: urine Time: end of shift Parameter: Styrene
108-10-1 4-methylpentan-2-one	
BEI	1 mg/L Medium: urine Time: end of shift Parameter: MIBK
108-88-3 toluene	
BEI	0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene
	0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene
	0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)
127-18-4 tetrachloroethylene	
BEI	3 ppm Medium: end-exhaled air Time: prior to shift Parameter: Tetrachloroethylene
	0.5 mg/L Medium: blood Time: prior to shift Parameter: Tetrachloroethylene
591-78-6 hexan-2-one	
BEI	0.4 mg/L Medium: urine Time: end of shift at end of workweek Parameter: 2,5-Hexanedione without hydrolysis

· **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.

· **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

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 10)

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.

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:



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:	64.7 °C (148.5 °F)

Flash point: < 23 °C (< 73.4 °F)

Flammability (solid, gaseous): Highly flammable.

Ignition temperature: 455 °C (851 °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:	5.5 Vol %
Upper:	44 Vol %

Vapor pressure at 20 °C (68 °F): 128 hPa (96 mm Hg)

Density Not applicable.

Relative density Not applicable.

Vapor density Not applicable.

Evaporation rate Not applicable.

Solubility in / Miscibility with

Water: Fully miscible.

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

Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

Solvent content:

Organic solvents:	96.8 %
VOC content:	95.60 %

Solids content: 0.4 %

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.

(Contd. on page 12)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 11)

- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **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:**

67-56-1 methanol

Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Irritant
Product is suspected to cause damage to fertility.
Product is suspected to cause birth defects.
The product can cause inheritable damage.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

56-23-5	carbon tetrachloride	2B
67-66-3	chloroform	2B
71-43-2	benzene	1
71-55-6	1,1,1-trichloroethane	2A
75-09-2	dichloromethane	2A
75-25-2	bromoform	3
75-27-4	bromodichloromethane	2B
75-35-4	1,1-dichloroethylene	2B
78-87-5	propylene dichloride	1
79-00-5	1,1,2-trichloroethane	3
79-01-6	trichloroethylene	1
79-34-5	1,1,2,2-tetrachloroethane	2B
95-47-6	o-xylene	3
95-50-1	1,2-dichlorobenzene	3
96-12-8	1,2-dibromo-3-chloropropane	2B
98-82-8	isopropylbenzene	2B
100-41-4	ethylbenzene	2B
100-42-5	styrene	2A
106-42-3	p-xylene	3
106-46-7	1,4-dichlorobenzene	2B
106-93-4	1,2-dibromoethane	2A
107-06-2	1,2-dichloroethane	2B
108-10-1	4-methylpentan-2-one	2B
108-38-3	m-xylene	3
108-88-3	toluene	3
124-48-1	dibromochloromethane	3
127-18-4	tetrachloroethylene	2A
541-73-1	1,3-dichlorobenzene	3
1634-04-4	Methyl-tert-butyl ether	3

· **NTP (National Toxicology Program)**

56-23-5	carbon tetrachloride	R
67-66-3	chloroform	R
71-43-2	benzene	K
75-09-2	dichloromethane	R
75-27-4	bromodichloromethane	R

(Contd. on page 13)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 12)

79-01-6	trichloroethylene	K
96-12-8	1,2-dibromo-3-chloropropane	R
98-82-8	isopropylbenzene	R
100-42-5	styrene	R
106-46-7	1,4-dichlorobenzene	R
106-93-4	1,2-dibromoethane	R
107-06-2	1,2-dichloroethane	R
127-18-4	tetrachloroethylene	R
· OSHA-Ca (Occupational Safety & Health Administration)		
71-43-2	benzene	
75-09-2	dichloromethane	
96-12-8	1,2-dibromo-3-chloropropane	

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **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.
- **Results of PBT and vPvB assessment**

· PBT:		
120-82-1	1,2,4-trichlorobenzene	

- **vPvB:** Not applicable.
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.







14 Transport information

· UN-Number · DOT, ADR, IMDG, IATA	UN1230
· UN proper shipping name · DOT · ADR · IMDG, IATA	Methanol 1230 METHANOL METHANOL
· Transport hazard class(es) · DOT	
· Class	3 Flammable liquids

(Contd. on page 14)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 13)

· Label	3, 6.1
· ADR	
	
· Class · Label	3 Flammable liquids 3+6.1
· IMDG	
	
· Class · Label	3 Flammable liquids 3/6.1
· IATA	
	
· Class · Label	3 Flammable liquids 3 (6.1)
· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids 336 F-E,S-D B SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

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

· Section 313 (Specific toxic chemical listings):	
67-56-1	methanol
56-23-5	carbon tetrachloride
67-66-3	chloroform
71-43-2	benzene
71-55-6	1,1,1-trichloroethane
75-09-2	dichloromethane
75-15-0	carbon disulphide
75-25-2	bromoform
75-27-4	bromodichloromethane

(Contd. on page 15)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 14)

75-34-3	1,1-dichloroethane
75-35-4	1,1-dichloroethylene
76-13-1	1,1,2-trichlorotrifluoroethane
78-87-5	propylene dichloride
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
95-47-6	o-xylene
95-50-1	1,2-dichlorobenzene
96-12-8	1,2-dibromo-3-chloropropane
98-82-8	isopropylbenzene
100-41-4	ethylbenzene
100-42-5	styrene
106-42-3	p-xylene
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
108-10-1	4-methylpentan-2-one
108-38-3	m-xylene
108-88-3	toluene
108-90-7	chlorobenzene

TSCA (Toxic Substances Control Act):

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

67-56-1	methanol	ACTIVE
56-23-5	carbon tetrachloride	ACTIVE
67-64-1	acetone	ACTIVE
67-66-3	chloroform	ACTIVE
71-43-2	benzene	ACTIVE
71-55-6	1,1,1-trichloroethane	ACTIVE
75-09-2	dichloromethane	ACTIVE
75-15-0	carbon disulphide	ACTIVE
75-25-2	bromoform	ACTIVE
75-27-4	bromodichloromethane	ACTIVE
75-34-3	1,1-dichloroethane	ACTIVE
75-35-4	1,1-dichloroethylene	ACTIVE
76-13-1	1,1,2-trichlorotrifluoroethane	ACTIVE
78-87-5	propylene dichloride	ACTIVE
78-93-3	butanone	ACTIVE
79-00-5	1,1,2-trichloroethane	ACTIVE
79-01-6	trichloroethylene	ACTIVE
79-20-9	methyl acetate	ACTIVE
79-34-5	1,1,2,2-tetrachloroethane	ACTIVE
95-47-6	o-xylene	ACTIVE
95-50-1	1,2-dichlorobenzene	ACTIVE
96-12-8	1,2-dibromo-3-chloropropane	ACTIVE
98-82-8	isopropylbenzene	ACTIVE
100-41-4	ethylbenzene	ACTIVE
100-42-5	styrene	ACTIVE
106-42-3	p-xylene	ACTIVE
106-46-7	1,4-dichlorobenzene	ACTIVE
106-93-4	1,2-dibromoethane	ACTIVE
107-06-2	1,2-dichloroethane	ACTIVE
108-10-1	4-methylpentan-2-one	ACTIVE

Hazardous Air Pollutants

67-56-1	methanol
56-23-5	carbon tetrachloride

(Contd. on page 16)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 15)

67-66-3	chloroform
71-43-2	benzene
71-55-6	1,1,1-trichloroethane
75-09-2	dichloromethane
75-15-0	carbon disulphide
75-25-2	bromoform
75-34-3	1,1-dichloroethane
75-35-4	1,1-dichloroethylene
78-87-5	propylene dichloride
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
95-47-6	o-xylene
96-12-8	1,2-dibromo-3-chloropropane
98-82-8	isopropylbenzene
100-41-4	ethylbenzene
100-42-5	styrene
106-42-3	p-xylene
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
108-10-1	4-methylpentan-2-one
108-38-3	m-xylene
108-88-3	toluene
108-90-7	chlorobenzene
120-82-1	1,2,4-trichlorobenzene
127-18-4	tetrachloroethylene
1634-04-4	Methyl-tert-butyl ether

· Proposition 65

· Chemicals known to cause cancer:

56-23-5	carbon tetrachloride
67-66-3	chloroform
71-43-2	benzene
75-09-2	dichloromethane
75-25-2	bromoform
75-27-4	bromodichloromethane
75-34-3	1,1-dichloroethane
75-35-4	1,1-dichloroethylene
78-87-5	propylene dichloride
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
96-12-8	1,2-dibromo-3-chloropropane
98-82-8	isopropylbenzene
100-41-4	ethylbenzene
100-42-5	styrene
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
108-10-1	4-methylpentan-2-one
127-18-4	tetrachloroethylene

· Chemicals known to cause reproductive toxicity for females:

75-15-0	carbon disulphide
---------	-------------------

· Chemicals known to cause reproductive toxicity for males:

71-43-2	benzene
75-15-0	carbon disulphide

(Contd. on page 17)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 16)

79-01-6	trichloroethylene
96-12-8	1,2-dibromo-3-chloropropane
106-93-4	1,2-dibromoethane
591-78-6	hexan-2-one

· Chemicals known to cause developmental toxicity:

67-56-1	methanol
67-66-3	chloroform
71-43-2	benzene
75-15-0	carbon disulphide
79-01-6	trichloroethylene
106-93-4	1,2-dibromoethane
108-10-1	4-methylpentan-2-one
108-88-3	toluene
591-78-6	hexan-2-one

· Carcinogenic categories

· EPA (Environmental Protection Agency)

56-23-5	carbon tetrachloride	L
67-64-1	acetone	I
67-66-3	chloroform	B2, L, NL
71-43-2	benzene	A, K/L
71-55-6	1,1,1-trichloroethane	II
75-09-2	dichloromethane	L
75-25-2	bromoform	B2
75-27-4	bromodichloromethane	B2
75-34-3	1,1-dichloroethane	C
75-35-4	1,1-dichloroethylene	C, S (inh.), I (oral)
78-93-3	butanone	I
79-00-5	1,1,2-trichloroethane	C
79-01-6	trichloroethylene	CaH
79-34-5	1,1,2,2-tetrachloroethane	L
95-47-6	o-xylene	I
95-50-1	1,2-dichlorobenzene	D
98-82-8	isopropylbenzene	D, CBD
100-41-4	ethylbenzene	D
106-42-3	p-xylene	I
106-93-4	1,2-dibromoethane	L
107-06-2	1,2-dichloroethane	B2
108-10-1	4-methylpentan-2-one	I
108-38-3	m-xylene	I
108-88-3	toluene	II
108-90-7	chlorobenzene	D
110-82-7	cyclohexane	I
120-82-1	1,2,4-trichlorobenzene	D
124-48-1	dibromochloromethane	C
127-18-4	tetrachloroethylene	L
156-59-2	cis-dichloroethylene	II

· TLV (Threshold Limit Value)

56-23-5	carbon tetrachloride	A2
67-64-1	acetone	A4
67-66-3	chloroform	A3
71-43-2	benzene	A1
71-55-6	1,1,1-trichloroethane	A4
75-09-2	dichloromethane	A3
75-15-0	carbon disulphide	A4
75-25-2	bromoform	A3
75-34-3	1,1-dichloroethane	A4

(Contd. on page 18)

Printing date 02/27/2023

Reviewed on 02/27/2023

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 17)

75-35-4	1,1-dichloroethylene	A4
76-13-1	1,1,2-trichlorotrifluoroethane	A4
78-87-5	propylene dichloride	A4
79-00-5	1,1,2-trichloroethane	A3
79-01-6	trichloroethylene	A2
79-34-5	1,1,2,2-tetrachloroethane	A3
95-47-6	o-xylene	A4
95-50-1	1,2-dichlorobenzene	A4
100-41-4	ethylbenzene	A3
100-42-5	styrene	A4
106-42-3	p-xylene	A4
106-46-7	1,4-dichlorobenzene	A3
106-93-4	1,2-dibromoethane	A3
107-06-2	1,2-dichloroethane	A4
108-38-3	m-xylene	A4
108-88-3	toluene	A4
108-90-7	chlorobenzene	A3
127-18-4	tetrachloroethylene	A3
1634-04-4	Methyl-tert-butyl ether	A3

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

56-23-5	carbon tetrachloride
67-66-3	chloroform
71-43-2	benzene
75-09-2	dichloromethane
75-35-4	1,1-dichloroethylene
78-87-5	propylene dichloride
79-00-5	1,1,2-trichloroethane
79-01-6	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
96-12-8	1,2-dibromo-3-chloropropane
106-46-7	1,4-dichlorobenzene
106-93-4	1,2-dibromoethane
107-06-2	1,2-dichloroethane
127-18-4	tetrachloroethylene

· **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:**

- methanol
- benzene
- 1,2-dibromo-3-chloropropane
- carbon tetrachloride
- (Z)-1,3-dichloropropene

· **Hazard statements**

- H225 Highly flammable liquid and vapor.
- H331 Toxic 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.
- H370 Causes damage to the central nervous system and the visual organs.
- H373 May cause damage to the central nervous system, the kidneys and the cardiovascular system through prolonged or repeated exposure.

· **Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P240 Ground/bond container and receiving equipment.

(Contd. on page 19)

Product Name: Volatiles Mix for OLM04.1

(Contd. of page 18)

P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see on this label).
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	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** 02/27/2023

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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

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

Flammable Liquids 2: Flammable liquids – Category 2

Acute Toxicity - Inhalation 3: Acute toxicity – Category 3

Sensitization - Skin 1: Skin sensitisation – Category 1

Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B

Carcinogenicity 1A: Carcinogenicity – Category 1A

Toxic to Reproduction 1A: Reproductive toxicity – Category 1A

Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2