Safety Data Sheet
acc. to OSHA HCS

Printing date 11/06/2018 *Reviewed on 11/06/2018*

1 Identification

· **Product identifier**

· **Product Name: Semi-Volatile Balance Mix - Option A**

· **Part Number:** SV-X
· **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

Carc. 1B H350 May cause cancer.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
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
aniline
dimethylnitrosoamine
azobenzene
· **Hazard statements**
H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
· **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.
Do not breathe dust/fume/gas/mist/vapors/spray.

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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)**

Health = 1
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 3
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
75-09-2	dichloromethane	98.8%
103-33-3	azobenzene	0.2%
62-53-3	aniline	0.2%
62-75-9	dimethylnitrosoamine	0.2%
86-74-8	carbazole	0.2%

· **Chemical identification of the substance/preparation**		
110-86-1	PYRIDINE	0.2%
108-39-4	3-Methylphenol	0.2%

4 First-aid measures

· **Description of first aid measures**
· **General information:** Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** Do not give anything to eat or drink - Do not induce vomitting
· **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, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **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** Wear protective equipment. Keep unprotected persons away.

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· **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.
Do not flush with water or aqueous cleansing agents
· **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
62-53-3	aniline	8.0 ppm
62-75-9	dimethylnitrosoamine	0.082 mg/m³
86-74-8	carbazole	0.66 mg/m³
110-86-1	PYRIDINE	3 ppm

· **PAC-2:**		
75-09-2	dichloromethane	560 ppm
62-53-3	aniline	12 ppm
62-75-9	dimethylnitrosoamine	0.9 mg/m³
86-74-8	carbazole	7.2 mg/m³
110-86-1	PYRIDINE	19 ppm

· **PAC-3:**		
75-09-2	dichloromethane	6,900 ppm
62-53-3	aniline	20 ppm
62-75-9	dimethylnitrosoamine	10 mg/m³
86-74-8	carbazole	43 mg/m³
110-86-1	PYRIDINE	3600* ppm

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 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.

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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/m³, 50 ppm BEI

62-53-3 aniline	
PEL	Long-term value: 19 mg/m³, 5 ppm and Homologues; Skin
REL	And Homologues; See Pocket Guide App. A
TLV	Long-term value: 7.6 mg/m³, 2 ppm Skin; BEI

62-75-9 dimethylnitrosoamine	
PEL	see 29 CFR 1910.1003
REL	See Pocket Guide App. A
TLV	Skin; L

· **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)

· **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

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.

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· **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:	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 at 20 °C (68 °F)**	1.32519 g/cm³ (11.05871 lbs/gal)
· **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:	99.0 %
VOC content:	0.20 %
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.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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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)
103-33-3 azobenzene		
Oral	LD50	1,000 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)

· **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:
Harmful
Carcinogenic.

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
75-09-2	dichloromethane	2A
103-33-3	azobenzene	3
62-53-3	aniline	3
62-75-9	dimethylnitrosoamine	2A
86-74-8	carbazole	2B
110-86-1	PYRIDINE	3

· NTP (National Toxicology Program)		
75-09-2	dichloromethane	R
62-75-9	dimethylnitrosoamine	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.
· **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:** Not applicable.
· **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.

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· **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
· **IMDG, IATA** DICHLOROMETHANE

· **Transport hazard class(es)**

· **DOT**

· **Class** 6.1 Toxic substances
· **Label** 6.1

· **ADR, IMDG, IATA**

· **Class** 6.1 Toxic substances
· **Label** 6.1

· **Packing group**
· **DOT, ADR, IMDG, IATA** III

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Toxic substances
· **Danger code (Kemler):** 60
· **EMS Number:** F-A,S-A
· **Segregation groups** 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)** 5L
· **Excepted quantities (EQ)** 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

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
62-53-3	aniline
62-75-9	dimethylnitrosoamine
110-86-1	PYRIDINE

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Product Name: Semi-Volatile Balance Mix - Option A

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108-39-4	3-Methylphenol

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

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

103-33-3	azobenzene
62-75-9	dimethylnitrosoamine
86-74-8	carbazole

· **Proposition 65**

· **Chemicals known to cause cancer:**

75-09-2	dichloromethane
103-33-3	azobenzene
62-53-3	aniline
62-75-9	dimethylnitrosoamine
86-74-8	carbazole
110-86-1	PYRIDINE

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

75-09-2	dichloromethane	L
103-33-3	azobenzene	B2
62-53-3	aniline	B2
62-75-9	dimethylnitrosoamine	B2
108-39-4	3-Methylphenol	C

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

75-09-2	dichloromethane	A3
62-53-3	aniline	A3
62-75-9	dimethylnitrosoamine	A3

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

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

· **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
aniline
dimethylnitrosoamine
azobenzene
· **Hazard statements**
H225 Highly flammable liquid and vapor.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.

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Product Name: Semi-Volatile Balance Mix - Option A

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Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Do not breathe 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** *11/06/2018 / -*
· **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
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
Carc. 1B: Carcinogenicity – Category 1B
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2