

**1 Identification**

- **Product identifier**
- **Product Name:** Base/Neutrals Surrogate Standard, 5 mL
- **Part Number:** CLP90-SB5
- **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. 2 H351 Suspected of causing cancer.*

*Repr. 2 H361 Suspected of damaging fertility or the unborn child.*



GHS07

*Acute Tox. 4 H302 Harmful if swallowed.*

*Eye Irrit. 2A H319 Causes serious eye irritation.*

*STOT SE 3 H336 May cause drowsiness or dizziness.*

- **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*

*acetone*

*Nitrobenzene-d5*

*1,2-Dichlorobenzene-d4*

- **Hazard statements**

*H225 Highly flammable liquid and vapor.*

*H302 Harmful if swallowed.*

*H319 Causes serious eye irritation.*

*H351 Suspected of causing cancer.*

*H361 Suspected of damaging fertility or the unborn child.*

*H336 May cause drowsiness or dizziness.*

- **Precautionary statements**

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

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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)**

HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	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	49.8%
67-64-1	acetone	49.8%
4165-60-0	Nitrobenzene-d5	0.1%

- **Chemical identification of the substance/preparation**

1718-51-0	p-Terphenyl-d14	0.1%
2199-69-1	1,2-Dichlorobenzene-d4	0.1%
321-60-8	2-Fluorobiphenyl	0.1%

### 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.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Immediately call a doctor.  
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:** CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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· **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
67-64-1	acetone	200 ppm
· PAC-2:		
75-09-2	dichloromethane	560 ppm
67-64-1	acetone	3200* ppm
· PAC-3:		
75-09-2	dichloromethane	6,900 ppm
67-64-1	acetone	5700* 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 remaining constituent has 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 <sup>3</sup> , 50 ppm BEI
67-64-1 acetone	
PEL	Long-term value: 2400 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 590 mg/m <sup>3</sup> , 250 ppm
TLV	Short-term value: 1187 mg/m <sup>3</sup> , 500 ppm Long-term value: 594 mg/m <sup>3</sup> , 250 ppm BEI

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· **Ingredients with biological limit values:****75-09-2 dichloromethane**

BEI 0.3 mg/L  
 Medium: urine  
 Time: end of shift  
 Parameter: Dichloromethane (semi-quantitative)

**67-64-1 acetone**

BEI 50 mg/L  
 Medium: urine  
 Time: end of shift  
 Parameter: Acetone (nonspecific)

· **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.  
 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.

· **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:** 40 °C (104 °F)

· **Flash point:** < 0 °C (<32 °F)

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

· **Ignition temperature:** 465 °C (869 °F)

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· <b>Decomposition temperature:</b>	Not applicable.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	2.6 Vol %
<b>Upper:</b>	22 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	453 hPa (339.8 mm Hg)
· <b>Density</b>	Not applicable.
· <b>Relative density</b>	Not applicable.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not applicable.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	99.6 %
<b>VOC content:</b>	0.00 %
· <b>Solids content:</b>	0.0 %
· <b>Other information</b>	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.

### 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)

- **Primary irritant effect:**
- **on the eye:** 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  
Irritant

Product is suspected to cause damage to fertility.  
Product is suspected to cause birth defects.

- **Carcinogenic categories**

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

75-09-2 dichloromethane	2A
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- **NTP (National Toxicology Program)**

75-09-2 dichloromethane	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

75-09-2 dichloromethane


### 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 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even 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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |   |   |
|---|---|
| · <b>UN-Number</b><br>· <b>DOT, ADR, IMDG, IATA</b>   | UN1993  |
| · <b>UN proper shipping name</b><br>· <b>DOT</b><br>· <b>ADR</b><br>· <b>IMDG, IATA</b>   | Flammable liquids, n.o.s. (Acetone, Dichloromethane)<br>1993 FLAMMABLE LIQUID, N.O.S. (ACETONE, DICHLOROMETHANE)<br>FLAMMABLE LIQUID, N.O.S. (ACETONE, DICHLOROMETHANE) |
| · <b>Transport hazard class(es)</b><br>· <b>DOT, ADR, IMDG, IATA</b>  |   |
|    |   |
| · <b>Class</b><br>· <b>Label</b>  | 3 Flammable liquids<br>3  |
| · <b>Packing group</b><br>· <b>DOT, ADR, IMDG, IATA</b>   | II  |
| · <b>Environmental hazards:</b>   | Not applicable.   |
| · <b>Special precautions for user</b><br>· <b>Danger code (Kemler):</b><br>· <b>EMS Number:</b><br>· <b>Segregation groups</b><br>· <b>Stowage Category</b> | Warning: Flammable liquids<br>33<br>F-E,S-E<br>Liquid halogenated hydrocarbons<br>B   |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>  | Not applicable.   |

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**· 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 1993 FLAMMABLE LIQUID, N.O.S. (ACETONE, DICHLOROMETHANE), 3, II

**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
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**· TSCA (Toxic Substances Control Act):**

75-09-2	dichloromethane
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67-64-1	acetone
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321-60-8	2-Fluorobiphenyl
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**· TSCA new (21st Century Act): (Substances not listed)**

4165-60-0	Nitrobenzene-d5
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**· Proposition 65**

**· Chemicals known to cause cancer:**

75-09-2	dichloromethane
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**· 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
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67-64-1	acetone	I
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**· TLV (Threshold Limit Value established by ACGIH)**

75-09-2	dichloromethane	A3
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67-64-1	acetone	A4
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**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

75-09-2	dichloromethane
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**· 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

acetone

Nitrobenzene-d5

1,2-Dichlorobenzene-d4

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· **Hazard statements**

H225 Highly flammable liquid and vapor.  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H336 May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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** 03/21/2019 / -

· **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  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Carc. 2: Carcinogenicity – Category 2  
Repr. 2: Reproductive toxicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US