Printing date 02/27/2023 Reviewed on 02/27/2023

1 Identification

- · Product identifier
- · Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL
- · Part Name: CLP90-SBH5
- · 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



Flammable Liquids 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Toxicity - Dermal 2 H310 Fatal in contact with skin.



GHS08 Health hazard

Germ Cell Mutagenicity 1B H340 May cause genetic defects. Carcinogenicity 1A H350 May cause cancer.

Toxic to Reproduction 2 H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to the central nervous system and the hematopoietic system through prolonged or

repeated exposure.

Aspiration Hazard 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Toxicity - Oral 4 H302 Harmful if swallowed. Skin Irritation 2 H315 Causes skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 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

GHS06

GHS07

GHS08

· Signal word Danger

Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 1)

· Hazard-determining components of labeling:

benzene

dichloromethane

Nitrobenzene-d5

acetone

· Hazard statements

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H310 Fatal in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H372 Causes damage to the central nervous system and the hematopoietic system through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

· 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.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P262 Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

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.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330 Rinse mout

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 3 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *3 Fire = 3Reactivity = 0

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

3 Composition/information on ingredients

- $\cdot \textit{Chemical characterization: Mixtures}$
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous	· Dangerous components:		
75-09-2	dichloromethane	33.3333%	
71-43-2	benzene	32.3334%	
67-64-1	acetone	32.3333%	
2199-69-1	1,2-Dichlorobenzene-d4	0.5%	
4165-60-0	Nitrobenzene-d5	0.5%	
Chamicali	Chamical identification of the substance/proparation		

· Chemicai iae	milication of the substance/preparation	
321-60-8 2-	-Fluorobiphenyl	0.5%
1718-51-0 p-	-Terphenyl-d14	0.5%

(Contd. on page 3)

Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 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.

- · 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 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, 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.

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

	o nicolar control and or comments	
· PAC-1:		
75-09-2	dichloromethane	200 ppm
71-43-2	benzene	52 ppm
67-64-1	acetone	200 ppm
· PAC-2:		
75-09-2	dichloromethane 5	60 ppm
71-43-2	benzene 8	800 ppm
67-64-1	acetone 3	3200* ppm
· PAC-3:		
75-09-2	dichloromethane 6	5,900 ppm
71-43-2	benzene 4	4000* ppm
67-64-1	acetone 5	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.



Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 3)

- · Conditions for safe storage, including any incompatibilities
- · 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.
- · 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.				
75-0	9-2 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: 50 ppm BEI, A3				
71-4	3-2 benzene				
PEL	Short-term value: 15* mg/m³, 5* ppm Long-term value: 3* mg/m³, 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				
67-6	4-1 acetone				
PEL	Long-term value: 2400 mg/m³, 1000 ppm				
REL	Long-term value: 590 mg/m³, 250 ppm				
TLV	Short-term value: 500 ppm Long-term value: 250 ppm A4, BEI				

· Ingredients with biological limit values:

75-09-2 dichloromethane

BEI 0.3 mg/L Medium: urine

Time: end of shift

Parameter: Dichloromethane (semi-quantitative)

71-43-2 benzene

BEI 25 μg/g creatinine

Medium: urine

Time: end of shift Parameter

Parameter: S-Phenylmercapturic acid (background

500 μg/g creatinine Medium: urine Time: end of shift

Parameter: t,t-Muconic acid (background)

67-64-1 acetone

BEI 25 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.

(Contd. on page 5)

Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 4)

- · 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:



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

Fully miscible.

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:



Water:

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):	Highly flammable.		
· Ignition temperature:	465 °C (869 °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:	1.2 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			

(Contd. on page 6)

Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 5)

		(Conta. or page 3)	
· Partition coefficient (n-octan	Partition coefficient (n-octanol/water): Not applicable.		
· Viscosity:			
Dynamic:	Not applicable.		
Kinematic:	Not applicable.		
· Solvent content:			
Organic solvents:	98.0 %		
VOC content:	32.33 %		
Solids content:	0.0 %		
· Other information	No further relevant information available.		

10 Stability and reactivity

- $\cdot \textit{Reactivity No further relevant information available}.$
- · 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 v	· LD/LC50 values that are relevant for classification:			
75-09-2 die	75-09-2 dichloromethane			
Oral	LD50	1,600 mg/kg (rat)		
Inhalative	Inhalative LC50/4 h 88 mg/l (rat)			
71-43-2 be	nzene			
Oral	LD50	4,894 mg/kg (rat)		
Dermal	Dermal LD50 48 mg/kg (mouse)			
Inhalative	Inhalative LC50/4 h 9,980 mg/l (mouse)			

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · 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.

The product can cause inheritable damage.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)		
75-09-2	dichloromethane	2A
71-43-2	benzene	1
· NTP (Na	tional Toxicology Program)	
75-09-2	dichloromethane	R
71-43-2	benzene	K
· OSHA-C	a (Occupational Safety & Health Administration)	
75-09-2	dichloromethane	
71-43-2	benzene	

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.



Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 6) · 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.
- · Uncleaned packagings:

· Environmental hazards:

- · 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	UN1992
· UN proper shipping name · DOT · ADR · IMDG, IATA	Flammable liquids, toxic, n.o.s. (Acetone, Benzene) 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONE, BENZENE) FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONE, BENZENE)
· Transport hazard class(es)	
· DOT	
· Class · Label	3 Flammable liquids 3, 6.1
· ADR	.,
Class Class	2 Elanous del a liscoi da
· 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
- , ,	

Not applicable.

(Contd. on page 8)

Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 7) · Special precautions for user Warning: Flammable liquids · Hazard identification number (Kemler code): 336 · EMS Number: F-E,S-DВ · Stowage Category · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: $\cdot ADR$ · Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml \cdot IMDG · Limited quantities (LQ) 1LCode: E2 · Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml · UN "Model Regulation": UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONE, BENZENE), 3

15 Regulatory information

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

· Section	· Section 313 (Specific toxic chemical listings):		
75-09-	2 dichloromethane		
71-43-	2 benzene		

(6.1), II

· 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.

75-09-2	dichloromethane	ACTIVE
71-43-2	benzene	ACTIVE
67-64-1	acetone	ACTIVE
321-60-8	2-Fluorobiphenyl	ACTIVE

Hazardous Air Pollutants
75-09-2 dichloromethane
71-43-2 benzene

· Proposition 65

· Chemicals known to cause cancer:

75-09-2 dichloromethane

71-43-2 benzene

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

71-43-2 benzene

· Chemicals known to cause developmental toxicity:

71-43-2 benzene

· Carcinogenic categories

· EPA (Environmental Protection Agency)	
75-09-2 dichloromethane	L
71-43-2 benzene	A, K/L
67-64-1 acetone	I
· TLV (Threshold Limit Value)	
75-09-2 dichloromethane	A3
71-43-2 benzene	A1
67-64-1 acetone	A4
NIOSH-Ca (National Institute for Occupational Safety and Health)	

75-09-2 dichloromethane

73 07 2 dientorometrian

71-43-2 benzene

Printing date 02/27/2023 Reviewed on 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 8)

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

· Hazard pictograms









GHS02

GHS06

GHS07

· Signal word Danger

Hazard-determining components of labeling:

benzene

dichloromethane

Nitrobenzene-d5

acetone

Hazard statements

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H310 Fatal in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H372 Causes damage to the central nervous system and the hematopoietic system through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P210

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray. P262 Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

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.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330 Rinse mouth.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405

Dispose of contents/container in accordance with local/regional/national/international regulations. P501

· National regulations:

· Additional classification according to Decree on Hazardous Materials: Carcinogenic hazardous material group III (dangerous).

· 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



Reviewed on 02/27/2023 Printing date 02/27/2023

Product Name: High Conc Base/Neutrals Surrogate Standard, 5 mL

(Contd. of page 9)

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 - Oral 4: Acute toxicity – Category 4
Acute Toxicity - Dermal 2: Acute toxicity – Category 2
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 1A
Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B

Eye Irritation 2A: Serious eye aamageeye Irritation – Category 2A
Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B
Carcinogenicity 1A: Carcinogenicity – Category 1A
Toxic to Reproduction 2: Reproductive toxicity – Category 2
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1
Aspiration Hazard 1: Aspiration hazard – Category 1