Printing date 12/15/2015 Reviewed on 12/15/2015

1 Identification

- · Product identifier
- · Product Name: CARBAZOLE STOCK SOLUTION
- · Part Number: CLP90-X
- $\cdot \textbf{\textit{Application of the substance / the mixture } \textit{Certified Reference Material} \\$
- · 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



GHS08 Health hazard

H351 Suspected of causing cancer. Carc. 2



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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





GHS07

GHS08

- · Signal word Warning
- · Hazard-determining components of labeling:

dichloromethane

· Hazard statements

Harmful if swallowed.

Suspected of causing cancer.

Precautionary statements

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

Wash thoroughly after handling.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1Fire = 0

REACTIVITY 0

Reactivity = 0

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- · 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.

· Dangero	components:	
75-09-2	dichloromethane	99.8%
86-74-8	carbazole	0.2%

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: 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.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

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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:

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

Long-term value: 174 mg/m³, 50 ppm

REI

· Ingredients with biological limit values:

75-09-2 dichloromethane

BEI 0.3 mg/L

Medium: urine

Time: end of shift

Parameter: Dichloromethane (semi-quantitative)

- 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.

Wash hands before breaks and at the end of work.

· Breathing equipment:

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: Safety glasses

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information

· Appearance:

Form: Liquid

Color: According to product specification

Characteristic · Odor: · 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: Not applicable.

· Flammability (solid, gaseous): Not applicable.

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	(Contd. of page 3)
· Ignition temperature:	
Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not applicable. Not applicable.
· Vapor pressure:	Not determined.
 Density at 20 °C (68 °F) Relative density Vapour density Evaporation rate 	1.32834 g/cm³ (11.085 lbs/gal) Not applicable. Not applicable. Not applicable.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/wat	t er): Not applicable.
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.
· Solvent content: Organic solvents:	99.8 %
Solids content: Other information	0.2 % No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- $\cdot \textit{Chemical stability}$
- 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.
- $\cdot \textit{Hazardous decomposition products:} \ \textit{No dangerous decomposition products known.}$

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values that are relevant for classification:						
75-09-2 di	chlorometh	hane				
Oral	LD50	1600 mg/kg (rat)				
Inhalative	LC50/4 h	88 mg/l (rat)				

- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations:
- · Carcinogenic categories

curemogenic eurogories	
· IARC (International Agency for Research on Cancer)	
75-09-2 dichloromethane	2 <i>B</i>
86-74-8 carbazole	2 <i>B</i>
· NTP (National Toxicology Program)	
75-09-2 dichloromethane	R
· OSHA-Ca (Occupational Safety & Health Administration)	
75-09-2 dichloromethane	

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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.

4 Transport information		
· UN-Number · DOT, ADR, IMDG, IATA	UN1593	
· UN proper shipping name · DOT · ADR · IMDG, IATA	Dichloromethane mixture 1593 Dichloromethane mixture DICHLOROMETHANE mixture	
· Transport hazard class(es)		
$\cdot DOT$		
· 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 Danger code (Kemler): EMS Number: Segregation groups	Warning: Toxic substances 60 F-A,S-A Liquid halogenated hydrocarbons	
· Transport in bulk according to Annex II of MARP Code	POL73/78 and the IBC Not applicable.	
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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 MIXTURE, 6.1, III, (E)

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

75-09-2 dichloromethane

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- Proposition 65
- · Chemicals known to cause cancer:

All ingredients are listed.

· 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

· TLV (Threshold Limit Value established by ACGIH)

75-09-2 dichloromethane

A3

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

75-09-2 dichloromethane

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





GHS07

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- · Signal word Warning
- $\cdot \textit{Hazard-determining components of labeling:}$

dich loromethane

· Hazard statements

Harmful if swallowed.

Suspected of causing cancer.

· Precautionary statements

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

Wash thoroughly after handling.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

Safety Data Sheet acc. to OSHA HCS

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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 12/15/2015 / -
- · 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)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4 Carc. 2: Carcinogenicity, Hazard Category 2