

Safety Data Sheet
acc. to OSHA HCS

Printing date 11/20/2018

Reviewed on 11/20/2018

1 Identification

- **Product identifier**
- **Product Name:** Stock VOA
- **Part Number:** USP-RS-C3A
- **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**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Danger

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

ethanol

- **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H350 May cause cancer.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

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

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

If exposed or concerned: Get medical advice/attention.

If skin irritation occurs: 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 = 2

Fire = 1

Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = *2
FIRE	1	Fire = 1
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:

67-68-5	dimethyl sulfoxide	97.6%
108-10-1	4-methylpentan-2-one	0.1%
64-17-5	ethanol	0.1%
98-82-8	isopropylbenzene	0.1%

· Chemical identification of the substance/preparation

71-41-0	Amyl alcohol	0.1%
71-23-8	propan-1-ol	0.1%
78-92-2	butanol	0.1%
78-93-3	butanone	0.1%
78-83-1	2-methylpropan-1-ol	0.1%
67-63-0	propan-2-ol	0.1%
67-64-1	acetone	0.1%
123-86-4	n-butyl acetate	0.1%
60-29-7	diethyl ether	0.1%
141-78-6	ethyl acetate	0.1%
142-82-5	heptane	0.1%
110-19-0	isobutyl acetate	0.1%
108-21-4	isopropyl acetate	0.1%
79-20-9	methyl acetate	0.1%
109-66-0	pentane	0.1%
1634-04-4	Methyl-tert-butyl ether	0.1%
109-60-4	propyl acetate	0.1%
123-51-3	Isoamyl alcohol	0.1%
100-66-3	anisole	0.1%
109-94-4	ethyl formate	0.1%
71-36-3	butan-1-ol	0.1%

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** 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. If symptoms persist, 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** No further relevant information available.

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- **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).
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:**

67-68-5	dimethyl sulfoxide	150 ppm
71-23-8	propan-1-ol	250 ppm
78-92-2	butanol	150 ppm
78-93-3	butanone	200 ppm
78-83-1	2-methylpropan-1-ol	150 ppm
67-63-0	propan-2-ol	400 ppm
108-10-1	4-methylpentan-2-one	75 ppm
67-64-1	acetone	200 ppm
123-86-4	n-butyl acetate	5 ppm
64-17-5	ethanol	1,800 ppm
60-29-7	diethyl ether	500 ppm
141-78-6	ethyl acetate	1,200 ppm
142-82-5	heptane	500 ppm
110-19-0	isobutyl acetate	450 ppm
108-21-4	isopropyl acetate	200 ppm
98-82-8	isopropylbenzene	50 ppm
79-20-9	methyl acetate	250 ppm
109-66-0	pentane	3000* ppm
1634-04-4	Methyl-tert-butyl ether	50 ppm
109-60-4	propyl acetate	250 ppm
123-51-3	Isoamyl alcohol	125 ppm
100-66-3	anisole	1.6 mg/m ³
109-94-4	ethyl formate	100 ppm
71-36-3	butan-1-ol	60 ppm

· **PAC-2:**

67-68-5	dimethyl sulfoxide	290 ppm
71-23-8	propan-1-ol	670 ppm
78-92-2	butanol	220 ppm
78-93-3	butanone	2700* ppm
78-83-1	2-methylpropan-1-ol	1,300 ppm
67-63-0	propan-2-ol	2000* ppm
108-10-1	4-methylpentan-2-one	500 ppm
67-64-1	acetone	3200* ppm
123-86-4	n-butyl acetate	200 ppm
64-17-5	ethanol	3300* ppm
60-29-7	diethyl ether	3200* ppm
141-78-6	ethyl acetate	1,700 ppm
142-82-5	heptane	830 ppm
110-19-0	isobutyl acetate	1300* ppm
108-21-4	isopropyl acetate	2700* ppm
98-82-8	isopropylbenzene	300 ppm
79-20-9	methyl acetate	1,700 ppm

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109-66-0	pentane	33000*** ppm
1634-04-4	Methyl-tert-butyl ether	570 ppm
109-60-4	propyl acetate	1,300 ppm
123-51-3	Isoamyl alcohol	1700* ppm
100-66-3	anisole	18 mg/m ³
109-94-4	ethyl formate	1,300 ppm
71-36-3	butan-1-ol	800 ppm
· PAC-3:		
67-68-5	dimethyl sulfoxide	1,800 ppm
71-23-8	propan-1-ol	4000* ppm
78-92-2	butanol	10000** ppm
78-93-3	butanone	4000* ppm
78-83-1	2-methylpropan-1-ol	8000* ppm
67-63-0	propan-2-ol	12000** ppm
108-10-1	4-methylpentan-2-one	3000* ppm
67-64-1	acetone	5700* ppm
123-86-4	n-butyl acetate	3000* ppm
64-17-5	ethanol	15000* ppm
60-29-7	diethyl ether	19000*** ppm
141-78-6	ethyl acetate	10000** ppm
142-82-5	heptane	5000* ppm
110-19-0	isobutyl acetate	7500** ppm
108-21-4	isopropyl acetate	16000** ppm
98-82-8	isopropylbenzene	730 ppm
79-20-9	methyl acetate	10000* ppm
109-66-0	pentane	200000*** ppm
1634-04-4	Methyl-tert-butyl ether	5300* ppm
109-60-4	propyl acetate	8000* ppm
123-51-3	Isoamyl alcohol	10000** ppm
100-66-3	anisole	110 mg/m ³
109-94-4	ethyl formate	8000* ppm
71-36-3	butan-1-ol	8000** ppm

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:** Keep receptacle tightly sealed.
- **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:**

67-68-5	dimethyl sulfoxide	
WEEL	Long-term value: 250 ppm	
108-10-1	4-methylpentan-2-one	
PEL	Long-term value: 410 mg/m ³ , 100 ppm	

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REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 82 mg/m ³ , 20 ppm BEI
64-17-5 ethanol	
PEL	Long-term value: 1900 mg/m ³ , 1000 ppm
REL	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1880 mg/m ³ , 1000 ppm
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: (246) NIC-0.5 mg/m ³ , (50) NIC-0.1 ppm NIC-A3
· Ingredients with biological limit values:	
108-10-1 4-methylpentan-2-one	
BEI	1 mg/L Medium: urine Time: end of shift Parameter: MIBK

· **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.

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

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· Odour Threshold:	Not applicable.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	189 °C (372.2 °F)
· Flash point:	> 60 °C (>140 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	270 °C (518 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	1.8 Vol %
Upper:	63 Vol %
· Vapor pressure at 20 °C (68 °F):	2.5 hPa (1.9 mm Hg)
· Density at 20 °C (68 °F)	1.09332-1.09333 g/cm ³ (9.12376-9.12384 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:	100.0 %
VOC content:	99.80 %
Solids content:	0.0 %
· 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.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

67-68-5 dimethyl sulfoxide

Oral	LD50	14,500 mg/kg (rat)
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- **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:
Irritant

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

67-63-0	propan-2-ol	3
108-10-1	4-methylpentan-2-one	2B
64-17-5	ethanol	1
98-82-8	isopropylbenzene	2B
1634-04-4	Methyl-tert-butyl ether	3

· NTP (National Toxicology Program)

98-82-8	isopropylbenzene	R
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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· 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

· UN-Number

· DOT, ADR, ADN, IMDG, IATA Not Regulated

· UN proper shipping name

· DOT, ADR, ADN, IMDG, IATA Not Regulated

· Transport hazard class(es)

· DOT, ADR, ADN, IMDG, IATA

· Class Not Regulated

· Packing group

· DOT, ADR, IMDG, IATA Not Regulated

· Environmental hazards:

Not applicable.

· Special precautions for user

Not applicable.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC

Code Not applicable.

· UN "Model Regulation":

Not Regulated

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15 Regulatory information

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

- **Section 313 (Specific toxic chemical listings):**

78-92-2	butanol
78-93-3	butanone
67-63-0	propan-2-ol
108-10-1	4-methylpentan-2-one
98-82-8	isopropylbenzene
1634-04-4	Methyl-tert-butyl ether
71-36-3	butan-1-ol

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

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

108-10-1	4-methylpentan-2-one
98-82-8	isopropylbenzene

- **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:**

108-10-1	4-methylpentan-2-one
64-17-5	ethanol

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

78-93-3	butanone	I
108-10-1	4-methylpentan-2-one	I
67-64-1	acetone	I
142-82-5	heptane	D
98-82-8	isopropylbenzene	D, CBD
71-36-3	butan-1-ol	D

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

71-23-8	propan-1-ol	A4
67-63-0	propan-2-ol	A4
67-64-1	acetone	A4
64-17-5	ethanol	A3
1634-04-4	Methyl-tert-butyl ether	A3

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

None of the ingredients is listed.

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

- **Hazard pictograms**



GHS07

GHS08

- **Signal word** Danger

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

ethanol

- **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H350 May cause cancer.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.

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*Keep out of reach of children.**Read label before use.**Wear protective gloves/protective clothing/eye protection/face protection.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**If skin irritation occurs: Get medical advice/attention.**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 11/20/2018 / -**• 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**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**Carc. 1A: Carcinogenicity – Category 1A*

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