

1 Identification

- **Product identifier**
- **Product Name:** Stock VOA
- **Part Name:** 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
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**



GHS08 Health hazard

Carcinogenicity 1A H350 May cause cancer.



GHS07

Skin Irritation 2 H315 Causes skin irritation.

Eye Irritation 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**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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



- HMIS-ratings (scale 0 - 4)



- 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%
64-17-5	ethanol	0.1%
98-82-8	isopropylbenzene	0.1%
108-10-1	4-methylpentan-2-one	0.1%
1634-04-4	Methyl-tert-butyl ether	0.1%

· Chemical identification of the substance/preparation

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

4 First-aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- 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: 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.

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· **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:**
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**

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

· PAC-2:		
67-68-5	dimethyl sulfoxide	290 ppm
60-29-7	diethyl ether	3200* ppm
64-17-5	ethanol	3300* ppm
67-63-0	isopropyl alcohol	2000* ppm
67-64-1	acetone	3200* ppm
71-23-8	propan-1-ol	670 ppm
71-36-3	butan-1-ol	800 ppm
78-83-1	2-methylpropan-1-ol	1,300 ppm
78-92-2	butanol	220 ppm
78-93-3	butanone	2700* ppm

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		(Contd. of page 3)
79-20-9	methyl acetate	1,700 ppm
98-82-8	isopropylbenzene	300 ppm
100-66-3	anisole	18 mg/m ³
108-10-1	4-methylpentan-2-one	500 ppm
108-21-4	isopropyl acetate	2700* ppm
109-60-4	propyl acetate	1,300 ppm
109-66-0	pentane	33000*** ppm
109-94-4	ethyl formate	1,300 ppm
110-19-0	isobutyl acetate	1300* ppm
123-51-3	Isoamyl alcohol	1700* ppm
123-86-4	n-butyl acetate	200 ppm
141-78-6	ethyl acetate	1,700 ppm
142-82-5	heptane	830 ppm
1634-04-4	Methyl-tert-butyl ether	570 ppm
· PAC-3:		
67-68-5	dimethyl sulfoxide	1,800 ppm
60-29-7	diethyl ether	19000*** ppm
64-17-5	ethanol	15000* ppm
67-63-0	isopropyl alcohol	12000** ppm
67-64-1	acetone	5700* ppm
71-23-8	propan-1-ol	4000* ppm
71-36-3	butan-1-ol	8000** ppm
78-83-1	2-methylpropan-1-ol	8000* ppm
78-92-2	butanol	10000** ppm
78-93-3	butanone	4000* ppm
79-20-9	methyl acetate	10000* ppm
98-82-8	isopropylbenzene	730 ppm
100-66-3	anisole	110 mg/m ³
108-10-1	4-methylpentan-2-one	3000* ppm
108-21-4	isopropyl acetate	16000** ppm
109-60-4	propyl acetate	8000* ppm
109-66-0	pentane	200000*** ppm
109-94-4	ethyl formate	8000* ppm
110-19-0	isobutyl acetate	7500** ppm
123-51-3	Isoamyl alcohol	10000** ppm
123-86-4	n-butyl acetate	3000* ppm
141-78-6	ethyl acetate	10000** ppm
142-82-5	heptane	5000* ppm
1634-04-4	Methyl-tert-butyl ether	5300* ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **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.

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

67-68-5 dimethyl sulfoxide	
WEEL	Long-term value: 250 ppm
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: 1000 ppm
	A3
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: 5 ppm
	A3
108-10-1 4-methylpentan-2-one	
PEL	Long-term value: 410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm
	Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 75 ppm
	Long-term value: 20 ppm
	BEI, A3
1634-04-4 Methyl-tert-butyl ether	
TLV	Long-term value: 50 ppm
	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.
- 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.

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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:	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/cm³ (9.12376-9.12384 lbs/gal)

· Relative density Not applicable.

· Vapor density Not applicable.

· Evaporation rate Not applicable.

· Solubility in / Miscibility with

Water: Fully miscible.

· 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.

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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

- **Carcinogenic categories**

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

64-17-5	ethanol	1
67-63-0	isopropyl alcohol	3
98-82-8	isopropylbenzene	2B
108-10-1	4-methylpentan-2-one	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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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 |

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· 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

15 Regulatory information

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

· Section 313 (Specific toxic chemical listings):	
67-63-0	isopropyl alcohol
71-36-3	butan-1-ol
78-92-2	butanol
98-82-8	isopropylbenzene
108-10-1	4-methylpentan-2-one
1634-04-4	Methyl-tert-butyl ether

· TSCA (Toxic Substances Control Act): All components have the value ACTIVE.	
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· Hazardous Air Pollutants	
98-82-8	isopropylbenzene
108-10-1	4-methylpentan-2-one
1634-04-4	Methyl-tert-butyl ether

· Proposition 65	
· Chemicals known to cause cancer:	
98-82-8	isopropylbenzene
108-10-1	4-methylpentan-2-one

· Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.	
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· Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.	
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· Chemicals known to cause developmental toxicity:	
64-17-5	ethanol
108-10-1	4-methylpentan-2-one

· Carcinogenic categories		
· EPA (Environmental Protection Agency)		
67-64-1	acetone	I
71-36-3	butan-1-ol	D
78-93-3	butanone	I
98-82-8	isopropylbenzene	D, CBD
108-10-1	4-methylpentan-2-one	I
142-82-5	heptane	D

· TLV (Threshold Limit Value)		
64-17-5	ethanol	A3
67-63-0	isopropyl alcohol	A4
67-64-1	acetone	A4
71-23-8	propan-1-ol	A4
1634-04-4	Methyl-tert-butyl ether	A3

· NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed.	
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- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



· **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**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P264 Wash thoroughly after handling.

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

P302+P352 If on skin: Wash with plenty of water.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P405 Store locked up.

P501 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.*

I6 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** *10/13/2022 / -*

· **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

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 Irritation 2: Skin corrosion/irritation – Category 2

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Carcinogenicity 1A: Carcinogenicity – Category 1A