1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	:	VARISOFT 222 LM 90%
Chemical Name	:	Quaternary AmineTetra-Alkyl Ammonium Sulfate

1.2. Recommended use of the chemical and restrictions on use

Recommended use	:	Industrial applications
Non-recommended use(s)	:	None known.

1.3. Details of the supplier of the safety data sheet

Company	:	Evonik Nutrition & Care GmbH Goldschmidtstr. 100 D-45127 Essen
Telephone	:	+49 (0)201 173-01
Telefax	:	+49 (0)201 173-3000
E-mail	:	productsafety-cs@evonik.com

Contact Canada

Company	:	
Telephone	:	+49 (0)201 173-01
Telefax	:	+49 (0)201 173-3000
E-mail	:	productsafety-cs@evonik.com

1.4. Emergency telephone number

Emergency information	:	+49 (0)201 173-01 (Phone) +49 (0)201 173-1854 (Fax)

24 HOUR EMERGENCY TELEPHONE NUMBERS:
CHEMTREC - US & CANADA toll free: +1-800-424-9300
CHEMTREC - MEXICO toll free: 01-800-681-9531
CHEMTREC GLOBAL - Collect calls accepted: +1-703-527-3887

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

Flammable liquids	Category 3	H226
Skin irritation	Category 2	H315
Eye irritation	Category 2	H319
Skin Sensitisation	Category 1	H317

2.2. Label elements

Symbol(s) :

Signal word : Warning

hazard statement	:	H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation.
Precautionary Statement (Prevention)	:	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P243 - Take precautionary measures against static discharge. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement (Response)	:	P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary Statement (Storage)	:	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

None known

3. Composition/information on ingredients

Classification according to Regulation 29CFR 1910.1200

Chemical Name	NJ Trade secrets CAS-No.	Concentration	Classification
1,2-Propanediol	- 57-55-6	< 5 %	
N,N-Di(2-tallow amidoethyl)-N-(2-hydroxyethyl)-N-methyl ammonium methyl sulfate	- 68153-35-5	80.0000 % - 90.0000 %	
2-Propanol (Isopropanol)	- 67-63-0	8 % - 10 %	H225, 2 , Flam. Liq. H319, 2 , Eye Dam./Eye Irrit. H336, 3 , STOT SE
1,3-Dioxan-4-ol, 2,6-dimethyl-, acetate	- 828-00-2	Ø 0.025%	

Texts of H phrases, see in Chapter 16

4. First aid measures

4.1. Description of first aid measures

General advice	:	Remove contaminated clothing immediately and store/dispose of safely
Inhalation	:	Remove individual from site of exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
Skin contact	:	Wash affected area with soap and water. Launder clothing before reuse.
Eye contact	:	Immediately flush with large amounts of water for at least 15 minutes or more. Lifting upper and lower lids intermittently. See a physician or ophthamologist and show this data sheet.
Ingestion	:	Immediately drink two large glasses of water. Call a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	:	The following symptoms may occur: - gastrointestinal complaints

Depending on the dose inhalation and/or ingestion may cause: headache, inebriation, unconsciousness.

4.3. Indication of any immediate medical attention and special treatment needed

If swallowed, flush stomach.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Dry chemical, water fog, alcohol foam
Unsuitable extinguishing media	:	

5.2. Special hazards arising from the substance or mixture

Burning can produce major amounts of carbon monoxide, carbon dioxide, sulfur dioxide, and nitrogen oxide.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

Water or foam may cause frothing which can be violent, especially if sprayed into containers of hot, burning liquid.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Use personal protective equipment.
Keep away from sources of ignition - no smoking

6.2. Environmental precautions

Do not allow to enter drains or waterways
Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance with the regulations.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	when working with the product vapors/aerosols may be evolved; therefore a local exhaust and ventilation are recommended.
Handling	:	no data available
Hygiene measures	:	No smoking, eating or drinking allowed when using this product. Wash hands before breaks and at end of work shift. Avoid Skin and Eye Contact. Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full.
General protective measures	:	Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin

7.2. Conditions for safe storage, including any incompatibilities

Prevention of fire and explosion

Information	:	Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors or other ignition sources at locations distant from material handling point. Never use cutting or welding torch on or near drum (even empty); product (or even residue) can ignite explosively. All five gallon pails and larger metal containers should be grounded. Care should be taken to avoid static discharge when transferring liquid to and from nonconductive containers.

Storage

Information	:	Containers should be grounded when pouring. Avoid free fall of liquid in excess of a few inches, unless adequate grounding is first established. Keep away from heat, sparks, and open flames. Based on the product flash point and vapor pressure, suitable storage should be provided in accordance with OSHA, 29 CFR 1910.106. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture, or weld on or near container. All label warnings must be observed until the container has been cleaned or reconditioned.
Further information on storage conditions	:	Exercise caution when handling contents of the container. Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Whenever possible, use mechanical means to move large and/or heavy objects to help prevent back injuries.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s)

Ingredients	CAS-No.	Statutory basis/list (Update)	Value type (Form of exposure; Expressed as)	Value	Short-term
2-Propanol (Isopropanol)	67-63-0	ACGIH (01 2005)	TWA	200 ppm	
		ACGIH (01 2005)	STEL	400 ppm	
		OSHA Z1 (06 1993)	PEL	400 ppm 980 mg/m3	

8.2. Exposure controls

Engineering controls

Appropriate engineering controls	:	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

Eye protection	:	Chemical splash proof goggles.
Hand protection	:	Wear protective gloves such as: Neoprene or Buna-N.
Body Protection	:	light protective clothing a protective ointment is recommended.
Respiratory protection	:	A NIOSH/MSHA approved respirator with organic vapor canister or self-contained breathing apparatus is recommended if there is insufficient ventilation to maintain exposures below the PEL and/or level of comfort.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	
Form	:	Liquid to Paste
Colour	:	Colorless to Pale Yellow

Odour	:	Slight, Typical
Odour Threshold	:	not measured
pH	:	ca. 4 - 7 Remarks: At 10%, in Isopropanol / Water solvent.
Melting point	:	
Boiling point	:	Boiling point/range 180 °F
Flash point	:	= 78 °F Method: Penskey-Marten CC
Evaporation rate	:	Slower than ether
Flammability	:	no data available
Upper Explosion/Ignition Limit	:	12 %(V) 12 %(V)
Lower explosion limit	:	2 %(V) 2 %(V)
Vapour pressure	:	43.89 mbar (68 °F)
Relative vapour density	:	Heavier than air
Relative density	:	no data available
Solubility	:	not measured
Water solubility	:	Dispersible
Partition coefficient (n-octanol/water)	:	not measured
Autoignition temperature	:	not measured
Thermal decomposition	:	Not measured
Viscosity, kinematic	:	no data available
Viscosity, dynamic	:	
Explosive properties	:	not measured
Oxidising properties	:	not measured

9.2. Other information

Density : 0.99 g/cm3

Metal corrosion : not measured

10. Stability and reactivity

10.1. Reactivity

see section "Possibility of hazardous reactions"

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

No

10.4. Conditions to avoid

Avoid heat, flame and contact with strong oxidizing agents.

10.5. Incompatible materials

Unknown

10.6. Hazardous decomposition products

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : LD50
Species: Rat
Dose: > 5 g/kg

Acute toxicity (inhalation) : The results based on calculation as per chapter 3.1.3.6 Directive 1272/2008/EC are above the classification limits.

Acute toxicity (dermal) : LD50
Remarks: FHSA Skin Irritation Index = 5.1; Severely irritating

Irritation/corrosion of the skin : By Buehler Modified method, a sensitizer when in ethanol, but not a sensitizer when in water. Not a strong skin sensitizer by Magnusson-Kligman method.

This material may cause severe irritation to the skin.

Serious eye damage/ eye irritation : Result: FHSA Rating: Primary Eye Irritant

Repeated dose toxicity : no data available

CMR assessment

Carcinogenicity : no data available

Mutagenicity : no data available

Teratogenicity : no data available

Toxicity to reproduction : no data available

Carcinogenicity	:	Not listed by NTP, IARC, ACGIH, or OSHA as a carcinogen.
Specific Target Organ Toxicity - Single exposure	:	no data available
Specific Target Organ Toxicity - Repeated exposure	:	no data available
Aspiration hazard	:	No Aspiration toxicity classification

12. Ecological information

Ecotoxicology Assessment

Acute aquatic toxicity	:	no data available
Chronic aquatic toxicity	:	no data available

12.1. Toxicity

Aquatoxicity, fish	:	no data available
Aquatoxicity, invertebrates	:	no data available
Aquatoxicity, algae / aquatic plants	:	no data available
Toxicity in microorganisms	:	no data available
chronic toxicity in fish	:	no data available
Chronic toxicity in aquatic Invertebrates	:	no data available
Toxicity in organisms which live in the soil	:	no data available
Toxicity in terrestrial plants	:	no data available
Toxicity to Above-Ground Organisms	:	no data available

12.2. Persistence and degradability

Photodegradation	:	no data available
Biological degradability	:	
Physico-chemical removability	:	no data available
Biochemical Oxygen	:	no data available

Demand (BOD)

Chemical Oxygen Demand (COD) : no data available

relation of BOD/COD : no data available

Dissolved organic carbon (DOC) : no data available

Adsorbed organic bound halogens (AOX) : no data available

Distribution among environmental compartments : no data available

12.3. Bioaccumulative potential

Bioaccumulation : no data available

12.4. Mobility in soil

Environmental distribution : no data available

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment : no data available

12.6. Other adverse effects

General Information : This product is toxic to fish: prevent run-off to sewers, streams or other bodies of water.

13. Disposal considerations

13.1. Waste treatment methods

Product : This product is an Ignitable waste (D001) under current RCRA regulations. Incineration in an authorized and permitted thermal treatment facility is recommended. Inquire of a permitted TSD facility for other options.

Contaminated packaging :

14. Transport information

D.O.T. Road/Rail

14.1	UN number:	UN 1993
14.2	UN proper shipping name:	Flammable liquid, n.o.s. (isopropanol)
14.3	Transport hazard class(es):	3
14.4	Packing group:	III
14.5	Environmental hazards (Marine pollutant):	--
14.6	Special precautions for user:	No

Air transport ICAO-TI/IATA-DGR

14.1. UN number: UN 1993

14.2.	UN proper shipping name:	Flammable liquid, n.o.s. (isopropanol)
14.3.	Transport hazard class(es):	3
14.4.	Packing group:	III
14.5.	Environmental hazards:	--
14.6.	Special precautions for user:	No

Sea transport IMDG-Code/GGVSee (Germany)

14.1.	UN number:	UN 1993
14.2.	UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (isopropanol)
14.3.	Transport hazard class(es):	3
14.4.	Packing group:	III
14.5.	Environmental hazards (Marine pollutant):	--
14.6.	Special precautions for user:	Yes
	EmS:	F-E,S-E
	Stowage category A	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
for transportapproval see regulatory information

15. Regulatory information

Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the (M)SDS contains all information required by the Controlled Products Regulation

Canada : WHMIS CLASSIFICATION
Class B, Division 2, Flammable Liquid
Class D, Division 2, Subdivision B
This product contains component(s) that are listed on the WHMIS Ingredient Disclosure List.

1,2-propanediol	57-55-6
2-Propanol	67-63-0

US regulations:

SARA Title III Section 311/312 Hazard Categories : Fire Hazard
Acute Health Hazard

CERCLA : CAS 67-63-0 :

Other regulations : CTFA: complies

State Right to Know : MASS RTK: YES
- 2-Propanol (Isopropanol) (CAS-No.: 67-63-0)

RH IS RTK: YES
- 1,2-Propanediol (CAS-No.: 57-55-6)
- 2-Propanol (Isopropanol) (CAS-No.: 67-63-0)

NJ RTK: YES

- 2-Propanol (Isopropanol) (CAS-No.: 67-63-0)

PENN RTK: YES
- 1,2-Propanediol (CAS-No.: 57-55-6)
- 2-Propanol (Isopropanol) (CAS-No.: 67-63-0)

SARA 313: YES

California Proposition 65 Statement : Notification : No
This product does not contain any substance(s) which are defined by the state of California to cause cancer, birth defects, or other reproductive effects.

TSCA lists : TSCA 8D - Yes
- 1,3-Dioxan-4-ol, 2,6-dimethyl-, acetate (CAS-No.: 828-00-2)
- 2-Propanol (Isopropanol) (CAS-No.: 67-63-0)
- N,N-Di(2-tallow amidoethyl)-N-(2-hydroxyethyl)-N-methyl ammonium methyl sulfate (CAS-No.: 68153-35-5)

HMIS Ratings

Health:	2
Flammability:	3
Reactivity:	0
Personal Protection:	X

Notification status

USA (TSCA) : listed/registered or exempted
Canada (DSL) : listed/registered or exempted

16. Other information

List of references

Revision date : 11/26/2014

Relevant H phrases from chapter 3

H225 : Highly flammable liquid and vapour.
H319 : Causes serious eye irritation.
H336 : May cause drowsiness or dizziness.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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Legend

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADNR	European agreement concerning the international carriage of dangerous goods by inland waterways (ADN)
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BetrSichV	German Ordinance on Industrial Safety and Health
c.c.	closed cup
CAS	Chemical Abstract Services
CESIO	European Committee of Organic Surfactants and their Intermediates
ChemG	German Chemicals Act
CMR	carcinogenic-mutagenic-toxic for reproduction
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EC50	half maximal effective concentration
GefStoffV	German Ordinance on Hazardous Substances
GGVSEB	German ordinance for road, rail and inland waterway transportation of dangerous goods
GGVSee	German ordinance for sea transportation of dangerous goods
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
ISO	International Organization For Standardization
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
REACH	REACH registration
RID	Convention concerning International Carriage by Rail
STOT	Specific Target Organ Toxicity
SVHC	Substances of Very High Concern
TA	Technical Instructions
TPR	Third Party Representative (Art. 4)
TRGS	Technical Rules for Hazardous Substances
VCI	German chemical industry association
vPvB	very persistent, very bioaccumulative
VOC	volatile organic compounds
VwVwS	German Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes
WGK	Water Hazard Class
WHO	World Health Organization