



SAFETY DATA SHEET

According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 083848

VULSOL 2525 S

Date of the previous version: 2015-05-13

Revision Date: 2015-10-13

Version 1.01

1. IDENTIFICATION

Product identifier

Product name VULSOL 2525 S

Other means of identification

Product Code(s) 083848

Number 8CZ

Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Metalworking fluid.

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheet

Supplier Address TOTAL Specialties USA Inc
1201 Louisiana Street, Suite 1800
Houston, TX 77002
Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address USRMLIN-info@total.com

Emergency telephone number

Company Phone Number +1 (908) 862-9300
Emergency telephone CHEMTREC: +1 800 424 9300 (24h)

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation - Category 1 - Subcategory B
Serious eye damage/eye irritation - Category 1

Label elements

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**DANGER**

Causes severe skin burns and eye damage

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
 Specific treatment (see Section 4 on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/ container to an approved waste disposal plant

Unknown Acute Toxicity

No information available

Hazards not otherwise classified (HNOC)

None known

Other information

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

Environmental properties Should not be released into the environment.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
2-(2-aminoethoxy)ethanol	929-06-6	10-15
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction	72162-23-3	0-3
Octanoic acid	124-07-2	0-5

** The exact percentage (concentration) of composition has been withheld as a trade secret****

4. FIRST AID MEASURES**First aid measures for different exposure routes**

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE. Show this material safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Immediate medical attention is required. Do not rub affected area.
Skin contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.
Inhalation	Move to fresh air. Immediate medical attention is required. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Inhalation of high concentrations of vapor or aerosols may cause irritation of the upper respiratory tract.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water. If swallowed, do not induce vomiting - seek medical advice.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms/effects, acute and delayed

Skin contact	Contact causes severe skin irritation and possible burns. Avoid contact with skin and clothing.
Eye contact	Causes serious eye damage. Avoid contact with eyes.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Redness. Itching. Burning.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Foam. Carbon dioxide (CO₂). ABC powder.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Special Hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

General Information Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

General Information Do not allow material to contaminate ground water system. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for cleaning up Dam up. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

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Precautions for safe handling

Advice on safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep out of reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep away from food, drink and animal feedingstuffs. Keep in a bonded area. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.

Materials to Avoid

Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Ingredients with workplace control parameters.

Exposure controls

Engineering Measures

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

General Information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Eye/Face Protection

If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots.

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Hand Protection

Impervious butyl rubber gloves. Nitrile rubber. Fluorinated rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection

None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

9. PHYSICAL AND CHEMICAL PROPERTIES
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Physical and chemical properties**Appearance**

limpid
To
slightly cloudy
light yellow
liquid
amine-like
No information available

Color**Physical State @20°C****Odor****Odor Threshold****Property****Values****Remarks****Method****pH****pH (as aqueous solution)**

9.7

Not applicable

Melting point/range

No information available

Boiling point/boiling range

Not applicable

Flash point

Not applicable

Evaporation rate

> 1.0

@ 25 °C

Flammability Limits in Air

No information available

upper

-

No information available

Lower

-

No information available

Vapor Pressure

No information available

Vapor density

No information available

Relative density

1.014

@ 15 °C

Density1011 kg/m³

@ 15 °C

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Water solubility	Not applicable
Solubility in other solvents	No information available
logPow	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Explosive properties	Not explosive
Oxidizing Properties	Not applicable
Possibility of hazardous reactions	Not applicable
Other information	
Freezing Point	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to Avoid	Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.
Incompatible Materials	Acids.
Hazardous Decomposition Products	None under normal use.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Information on likely routes of exposure

Principle Routes of Exposure Inhalation, Ingestion, Eye contact, Skin contact.

Numerical measures of toxicity

ATEmix (oral)	22810 mg/kg
ATEmix (dermal)	17440 mg/kg
Inhalation	
ATEmix (inhalation-dust/mist)	30.9 mg/l
ATEmix (inhalation-vapor)	403.6 mg/l

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
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2-(2-aminoethoxy)ethanol 929-06-6	LD50 3400 mg/kg (Rat)	LD50 > 3000 mg/kg (Rabbit)	LC50 (8h) > 8.7 mg/m ³ (Rat-Vapeurs)
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction 72162-23-3	LD50 > = 5000 mg/kg (Rat)	LD50 >= 2000 mg/kg (Rabbit)	LC50 (4h) >= 4.3 mg/l (Rat)
Octanoic acid 124-07-2	LD50 >2000 mg/kg (Rat-OECD 401)	LD50 > 2000 mg/kg (Rabbit - OECD 434)	LC50 (4h) > 0.1621 mg/l (rat - vapour)

Information on toxicological effects

Symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Redness. Itching. Burning.
Skin contact	Contact causes severe skin irritation and possible burns. Avoid contact with skin and clothing.
Eye contact	Causes serious eye damage. Avoid contact with eyes.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes burns.
Serious eye damage/eye irritation	Risk of serious damage to eyes.
Sensitization	Not classified as a sensitizer.
Carcinogenicity	This product is not classified carcinogenic.
Mutagenicity	This product is not classified as mutagenic.
Reproductive toxicity	This product does not present any known or suspected reproductive hazards.
Other adverse effects	Frequent or prolonged skin contact destroys the lipoacid cutaneous layer and may cause dermatitis.
Aspiration Hazard	Not classified.

12. ECOLOGICAL INFORMATION**Ecotoxicity****Acute aquatic toxicity - Product Information**

No information available

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
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2-(2-aminoethoxy)ethanol 929-06-6	ErC50 (72h) = 202 mg/l (static)	LC50 (96h) = > 681 mg/l (static)	EC50 (48h) = 189 mg/l Daphnia magna static	
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction 72162-23-3			EC50 (48h) >= 120 mg/l (Daphnia magna)	
Octanoic acid 124-07-2	EC50 (72h) 31 mg/l (Pseudokirchnerella subcapitata - static - OECD 201)	LC50 (96h) = 310 mg/L Oryzias latipes (semi-static) LC50 (96h) = 110 mg/L Brachydanio rerio (semi-static)	EC50 (24h) = 170 mg/L Daphnia magna EC50 (48h) 128 mg/l (Hyale plumulosa)	

Chronic aquatic toxicity - Product Information

No information available

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
2-(2-aminoethoxy)ethanol 929-06-6	NOECr (72h) 62.5 mg/l (static)			
Octanoic acid 124-07-2		NOEC (21d) 0.2 mg/l (Daphnia magna - OECD 211) LOEC (21d) 0.64 mg/l (Daphnia magna - OECD 211) EC50 (21d) 0.51 mg/l (Daphnia magna - OECD 211) LC50 (21d) 20 mg/l (Daphnia magna - OECD 211)	NOEC (28d) 6.4 mg/l (Danio rerio - OECD 305 E) LC50 (28d) 9.8 mg/l (Danio rerio - OECD 305 E) NOEC (28d) 2 mg/l (Danio rerio - OECD 305 E)	

Effects on terrestrial organisms No information available.**Persistence and degradability****General Information** No information available.**Bioaccumulative potential****Product Information** No information available.**logPow** No information available**Component Information**

Chemical Name	log Pow
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2-(2-aminoethoxy)ethanol 929-06-6	-1.89
Octanoic acid 124-07-2	3.05

Mobility

Soil Given its physical and chemical characteristics, the product is generally mobile in the ground

Water soluble

Other adverse effects

General Information No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment**

Waste Disposal Methods Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO/IATA Not regulated

IMDG/IMO Not regulated

ADR/RID Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories All the substances contained in this product are listed or exempted from listing in the following inventories:
U.S.A. (TSCA)

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U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois
2-(2-aminoethoxy)ethanol 929-06-6	X	X		
Triethanolamine 102-71-6	X	X	X	

16. OTHER INFORMATION

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NFPA	Health Hazard 3	Flammability 0	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 3	Flammability 0	Physical Hazard 0	Personal protection X

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

Revision Date: 2015-10-13
Revision Note *** Indicates updated section
Abbreviations, acronyms

Legend

Section 8
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH - National Institute for Occupational Safety and Health
TLV - Threshold Limit Values
PEL - Permissible Exposure Limits
IDLH - Immediately Dangerous to Life or Health concentrations
TWA - Time Weight Average
STEL - Short Term Exposure Limits
S* - Skin notation
TSCA - Toxic Substance Control Act

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet

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