

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier Cetyltrimethylammonium-p-toluene Sulfonate (CETATS)

Synonyms: Hexadecyl trimethyl ammonium-p-toluene sulfonate

Chemical Abstracts Registry No: 138-32-9

REACH Registration Number: 01-2120769714-43-0000

1.2. Relevant identified uses of the substance or mixture and uses advised against

personal care

1.3. Details of the supplier of the safety data sheet

Vertellus Specialties UK Ltd.
Seal Sands Road, Seal Sands
Middlesbrough, TS2 1UB
England
+44 1642-546546

Only Representative for EU REACH Registration:

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1.4. Emergency telephone number

Vertellus: +44 1642-546546
CHEMTREC (USA): +1-800-424-9300 (collect calls accepted)
CHEMTREC (International): +1-703-527-3887 (collect calls accepted)
NRCC (China): +86 25 85477110

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture (According to Regulation (EC) No 1272/2008, 29 CFR 1910.1200 and the Globally Harmonized System)

Skin Irritation Category 2
Serious Eye Irritation Category 2
Acute Toxicity Oral Category 4
Environmental Acute Category 1
Hazard Not Otherwise Classified - Combustible Dust
Specific Target Organ Systemic Toxicity Single Exposure Category 3

2.2. Label elements

Hazard Symbols (Pictogram):



Signal Word:

Warning

Hazard Precautions:

H302 - Harmful if swallowed.
H400 - Very toxic to aquatic life.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

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H335 - May cause respiratory irritation.

Prevention Precautionary Statements: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

First Aid Precautionary Statements: P302+P352 - IF ON SKIN: Wash with plenty of soap and 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.
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P391 - Collect spillage.

Storage Precautionary Statements: P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal Precautionary Statements: P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

2.3. Other hazards

Other Hazards: WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING).

SECTION 3: Composition/information on ingredients

3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (weight %)	EC Number	CLP Inventory/Annex VI	EU CLP Classification (1272/2008)
CETATS	138-32-9	~ 100	205-324-8	Not listed.	Aquatic Acute 1; H400 Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315 STOT SE 3; H335

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable).

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin Contact: Immediately flush with water for 15 minutes. Wash the contaminated skin with soap and water. If irritation develops, call a physician.

Eye Contact: Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. Get medical attention if irritation or other symptoms exist.

Inhalation: Remove from exposure area to fresh air immediately. Get medical attention.

Ingestion: If swallowed, do not induce vomiting. Get prompt medical attention. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

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Acute: May cause irritation in eyes and skin. Dust may irritate respiratory tract.
Delayed Effects: None known.

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

Note to Physician: No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media: Water spray, Use alcohol resistant foam, carbon dioxide, or dry chemical.

5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion: Combustion will produce carbon monoxide, carbon dioxide and oxides of nitrogen.
Potential for Dust Explosion: No data available -- handle in a manner that prevents generation of potentially explosive dust. Refer to European standards: EN1127-1, EN14491, EN14797, EN14373, and EN15089 for safe handling of and controlling explosive atmospheres in the workplace. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, or equivalent guidance, for safe handling.
Special Flammability Hazards: Not applicable.

5.3. Advice for firefighters

Basic Fire Fighting Guidance: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remain upwind and use personal protective equipment. Avoid dust formation and remove all sources of ignition.
Special Instructions: See Section 8 for personal protective equipment recommendations. Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded. Avoid dust generation during clean-up. Ensure thorough decontamination of the release area and clean-up personnel.

6.2. Environmental precautions

Prevent releases to soils, drains, sewers and waterways.

6.3. Methods and material for containment and cleaning up

Ventilate the area of spill or leak. Wear protective equipment during clean-up. Remove all ignition sources. Avoid generation of dust clouds during clean-up. Vacuum, scrape or scoop the material into a chemical waste container. Dispose of contents & container in accordance with local, regional, national or international regulations. Minimize entry of material into sewers and drainage systems.

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6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for Unique Hazards: Not applicable.

Practices to Minimize Risk: Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material. Do not eat, drink or smoke in work areas. Prevent contact with incompatible materials. Avoid spills and keep away from drains. Handle in a manner to prevent generation of aerosols, vapors or dust clouds. Wash hands thoroughly after handling this material.

Special Handling Equipment: Not applicable.

7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions & Recommendations: Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Dangerous Incompatibility Reactions: Strong alkalies and oxidizing agents.

Incompatibilities with Materials of Construction: None known

7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Country	Occupational Exposure Limit
Austria, France, Sweden, USA - OSHA	5 mg/m ³ as an 8-hour time-weighted average
Belgium, Spain, Switzerland	3 mg/m ³ as an 8-hour time-weighted average
Germany (AGS)	1.25 mg/m ³ as an 8-hour time-weighted average
Germany (DFG)	1.5 mg/m ³ as an 8-hour time-weighted average
Ireland	4 mg/m ³ as an 8-hour time-weighted average

Air Monitoring Method: Gravimetric analysis for total particulate and respirable fraction (<10 microns).

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Other Engineering Controls: All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an

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Personal Protective Equipment:	explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Impervious gloves (EN374), boots, and clothing (EN14605), chemical goggles or face shield where necessary. Where overexposures are a concern, use NIOSH-approved dust/mist respirator as necessary.
Respirator Caution:	Observe OSHA regulations for respirator use (29 CFR 1910.134) or equivalent guidance. Air-purifying respirators must not be used in oxygen-deficient atmospheres.
Thermal Hazards:	Not applicable.
Environmental Exposure Controls:	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature):	White crystalline powder with little to no odor.		
Vapor Pressure:	Not applicable	Evaporation Rate:	No data available
Specific Gravity or Density:	0.490 g/ml @ 20°C	Vapor Density (air = 1):	Not applicable
Boiling Point:	(decomposes) > 200 °C	Freezing / Melting Point:	DECOMPOSES AT 201 °C
Solubility in Water:	Slightly soluble	Octanol / Water Coefficient:	-0.62
pH:	6 - 8 (saturated solution)	Odor Threshold:	No data available.
Viscosity:	Not applicable	Autoignition Temperature:	No data available.
Flash Point and Method:	Not applicable.	Flammable Limits:	No data available.
Flammability (solid, gas):	Not Flammable	Decomposition Temperature:	> 200 °C
Explosive Properties:	Not explosive.	Oxidizing Properties:	Not an oxidizer.

9.2. Other information

Not applicable.

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	Not classified as dangerously reactive.
<u>10.2. Chemical stability</u>	Stable
<u>10.3. Possibility of hazardous reactions</u>	Polymerization is not expected to occur

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10.4. Conditions to avoid

Avoid contact with incompatible materials, dust generation, and sources of heat

10.5. Incompatible materials

Strong alkalis and oxidizing agents.

10.6. Hazardous decomposition products

Oxides of carbon; nitrogen; sulfur

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Oral LD ₅₀ :	(RAT) 1410 mg/ kg	CETATS
Acute Dermal LD ₅₀ :	No data available.	
Acute Inhalation LC ₅₀ :	No data available.	
Skin Irritation:	Irritating to the skin.	
Eye Irritation:	Causes eye irritation.	
Skin Sensitization:	Negative for sensitizing effects in guinea pig maximization test.	
Mutagenicity:	Negative for mutagenic activity in Ames testing and mouse lymphoma assay, both with and without metabolic activation.	
Reproductive / Developmental Toxicity:	No data available.	
Carcinogenicity:	This material is not listed by IARC, NTP or OSHA as a carcinogen. No test data is available that indicates this material is a carcinogen.	
Target Organs:	None known	
Aspiration Hazard:	Based on physical properties, not likely to be an aspiration hazard.	
Primary Route(s) of Exposure:	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.	
Most important symptoms and effects, both acute and delayed	May cause irritation in eyes and skin. Dust may irritate respiratory tract. Delayed Effects: None known.	
Additive or Synergistic effects:	None known.	

SECTION 12: Ecological information

<u>12.1. Toxicity</u>	96-hrLC ₅₀ Leuciscus idus 500 mg/L Aquatic EC ₅₀ (48h) Daphnia magna 280 µg/L	CETATS
<u>12.2. Persistence and degradability</u>	Readily biodegradable.	
<u>12.3. Bioaccumulative potential</u>	Bioconcentration is not expected to occur.	
<u>12.4. Mobility in soil</u>	Quaternary ammonium compounds are known for sorption firmly and quickly on the systems for a wide variety of materials such as sludge from sewage, sediments and clay.	
<u>12.5. Results of PBT and vPvB assessment</u>	This substance is not a PBT or vPvB.	

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12.6. Other adverse effects No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

US EPA Waste Number: Non-hazardous

Waste Classification: (per US regulations) The waste may be classified as "special" or hazardous per State regulations.

Waste Disposal: NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations. Dispose of this material responsibly, and in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws, and environmental protection duty of care principles. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate classification code according to the European Community List of Wastes should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

The following information applies to all shipping modes (DOT/IATA/ICAO/IMDG/ADR/RID/ADN), unless otherwise indicated:

14.1. UN number	UN3077	14.2. UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Cetyltrimethylammonium-p-toluene sulfonate)
14.3. Transport hazard class(es)	9	14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant		
14.6. Special precautions for user	Not applicable		
NA Emergency Guidebook Numbers:	171	IMDG EMS:	S-F; F-A
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code			Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

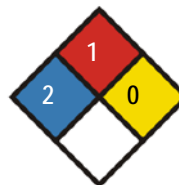
Chemical Inventory Lists:	Status:		
USA TSCA:	Listed	EC / list No.:	205-324-8
Canada(DSL/NDSL):	NDSL	Japan:	Not listed.
Korea:	Not listed.	Australia:	Not listed.
China:	Not listed.	Philippines:	Not listed.
Taiwan:	Listed	New Zealand:	Listed
German Water Hazard Classification:	WGK 3 - severe hazard to waters (<i>self-classification</i>)		
SARA 313:	Not listed.		
State Regulations:	Not applicable.		

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HMIS IV:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

NFPA:



15.2. Chemical safety assessment

A chemical safety assessment has not been performed on this substance.

SECTION 16: Other information

Classification Method: Bridging principle - similar substance
Expert judgment

Legend of Abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.

CAS = Chemical Abstracts Service.

CFR = Code of Federal Regulations.

DSL/NDSL = Domestic Substances List/Non-Domestic Substances List.

EC = European Community.

EINECS = European Inventory of Existing Commercial Chemical Substances.

ELINCS = European List of Notified Chemical Substances.

EU = European Union.

GHS = Globally Harmonized System.

LC = Lethal Concentration.

LD = Lethal Dose.

NFPA = National Fire Protection Association.

NIOSH = National Institute of Occupational Safety and Health.

NTP = National Toxicology Program.

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Limit.

RQ = Reportable Quantity.

SARA = Superfund Amendments and Reauthorization Act of 1986.

TLV = Threshold Limit Value.

WHMIS = Workplace Hazardous Materials Information System.

Important Note: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. The information contained herein may change without prior notice. THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS.

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