

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/15/2015

Reviewed on 09/14/2015

1 Identification

- **Product identifier**
- **Trade name:** TS-400
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Chemical Consultants Inc.
1850 Wild Turkey Circle
Corona, CA 92880
USA
+1 (951) 735-5511
ncollins@ccidom.com
- **Information department:** Product safety department
- **Emergency telephone number:** INFOTRAC 1-800-535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.

STOT RE 1 H372 Causes damage to the central nervous system through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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



GHS02



GHS07



GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
citrus terpene
Stoddard solvent
N-methyl-2-pyrrolidone
- **Hazard statements**
H226 Flammable liquid and vapor.

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*H315 Causes skin irritation.**H319 Causes serious eye irritation.**H317 May cause an allergic skin reaction.**H360 May damage fertility or the unborn child.**H372 Causes damage to the central nervous system through prolonged or repeated exposure.**H304 May be fatal if swallowed and enters airways.***Precautionary statements***P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.**P241 Use explosion-proof electrical/ventilating/lighting/equipment.**P260 Do not breathe dust/fume/gas/mist/vapors/spray.**P280 Wear protective gloves / eye protection / face protection.**P240 Ground/bond container and receiving equipment.**P233 Keep container tightly closed.**P242 Use only non-sparking tools.**P243 Take precautionary measures against static discharge.**P264 Wash thoroughly after handling.**P270 Do not eat, drink or smoke when using this product.**P272 Contaminated work clothing must not be allowed out of the workplace.**P201 Obtain special instructions before use.**P202 Do not handle until all safety precautions have been read and understood.**P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**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.**P321 Specific treatment (see on this label).**P363 Wash contaminated clothing before reuse.**P308+P313 IF exposed or concerned: Get medical advice/attention.**P333+P313 If skin irritation or rash occurs: Get medical advice/attention.**P337+P313 If eye irritation persists: Get medical advice/attention.**P314 Get medical advice/attention if you feel unwell.**P331 Do NOT induce vomiting.**P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.**P362+P364 Take off contaminated clothing and wash it before reuse.**P405 Store locked up.**P403+P235 Store in a well-ventilated place. Keep cool.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 2

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *1

Fire = 2

Reactivity = 0

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.

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· **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

8052-41-3	Stoddard solvent	20-40%
94266-47-4	citrus terpene	15-30%
107-98-2	1-methoxy-2-propanol	10-20%
111-76-2	2-butoxyethanol	10-20%
64742-47-8	Distillates (petroleum), hydrotreated light	1-10%
68551-16-6	Alkanes, C9-11-iso	1-10%
872-50-4	N-methyl-2-pyrrolidone	1-10%
34590-94-8	(2-methoxymethylethoxy)propanol	1-10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
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:** If symptoms persist consult doctor.
- **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.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Possibility of spontaneous combustion. rags soaked with solvent present a fire hazard and should be stored in an approved closed container.
During heating or in case of fire poisonous gases are produced.

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** For large spills: 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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Keep soiled rags in a closed container
- **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:**

8052-41-3 Stoddard solvent

PEL	Long-term value: 2900 mg/m ³ , 500 ppm
REL	Long-term value: 350 ppm Ceiling limit value: 1800* mg/m ³ *15-min
TLV	Long-term value: 525 mg/m ³ , 100 ppm

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107-98-2 1-methoxy-2-propanol

REL	Short-term value: 540 mg/m ³ , 150 ppm Long-term value: 360 mg/m ³ , 100 ppm
TLV	Short-term value: 369 mg/m ³ , 100 ppm Long-term value: 184 mg/m ³ , 50 ppm

111-76-2 2-butoxyethanol

PEL	Long-term value: 240 mg/m ³ , 50 ppm Skin
REL	Long-term value: 24 mg/m ³ , 5 ppm Skin
TLV	Long-term value: 97 mg/m ³ , 20 ppm BEI

872-50-4 N-methyl-2-pyrrolidone

WEEL	Long-term value: 10 ppm Skin
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34590-94-8 (2-methoxymethylethoxy)propanol

PEL	Long-term value: 600 mg/m ³ , 100 ppm Skin
REL	Short-term value: 900 mg/m ³ , 150 ppm Long-term value: 600 mg/m ³ , 100 ppm Skin
TLV	Short-term value: 909 mg/m ³ , 150 ppm Long-term value: 606 mg/m ³ , 100 ppm Skin

· Ingredients with biological limit values:**111-76-2 2-butoxyethanol**

BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
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872-50-4 N-methyl-2-pyrrolidone

BEI	100 mg/L Medium: urine Time: end of shift Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone
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· **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 and skin.

· **Breathing equipment:**

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.

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· **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:	Fluid
Color:	According to product specification
Odor:	Characteristic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	157 °C (315 °F)

· **Flash point:** 50 °C (122 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 210 °C (410 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower:	1.1 Vol %
Upper:	20.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 12 hPa (9 mm Hg)

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- | | |
|--|--|
| · Density at 20 °C (68 °F): | 0.857 g/cm ³ (7.152 lbs/gal) |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: Not miscible or difficult to mix. | |
| · Partition coefficient (n-octanol/water): Not determined. | |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| VOC content: | 685.0 g/l / 5.72 lb/gl |
| · 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:**

94266-47-4 citrus terpene

Oral	LD50	>5000 mg/kg (rabbit)
Dermal	LD50	>5000 mg/kg (rabbit)

68551-16-6 Alkanes, C9-11-iso

Oral	LD50	34600 mg/kg (rat)
Dermal	LD50	15400 mg/kg (rabbit)
Inhalative	LC50/4 h	>12.4 mg/l (rat)

872-50-4 N-methyl-2-pyrrolidone

Oral	LD50	3914 mg/kg (rat)
Dermal	LD50	8000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

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Irritant

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

94266-47-4 citrus terpene

EC50 (static) 0.36 mg/kg (daphnia)

- **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:**

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:**

Dispose of content and/or container in accordance with local, regional, national and/or international regulations.

- **Uncleaned packagings:**

- **Recommendation:**

Dispose of content and/or container in accordance with local, regional, national and/or international regulations

14 Transport information

- **UN-Number**

- **DOT**

NOT DOT REGULATED FOR DOMESTIC GROUND
TRANSPORTATION

- **IMDG, IATA**

UN1993

- **UN proper shipping name**

- **IMDG, IATA**

FLAMMABLE LIQUID, N.O.S. (citrus terpene, Stoddard solvent)

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· **Transport hazard class(es)**· **IMDG, IATA**

· **Class** 3 Flammable liquids
 · **Label** 3

· **Packing group**
 · **IMDG, IATA** III

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Flammable liquids
 · **Danger code (Kemler):** 30
 · **EMS Number:** F-E, S-E

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **IMDG**
 · **Limited quantities (LQ)** 5L
 · **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 1993 FLAMMABLE LIQUIDS, N.O.S. (CITRUS TERPENE, STODDARD SOLVENT), 3, III

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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

111-76-2 2-butoxyethanol

872-50-4 N-methyl-2-pyrrolidone

34590-94-8 (2-methoxymethylethoxy)propanol

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

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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.

· **Chemicals known to cause developmental toxicity:**

872-50-4 N-methyl-2-pyrrolidone

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

111-76-2 2-butoxyethanol

NL

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

111-76-2 2-butoxyethanol

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**



GHS02

GHS07

GHS08

· **Signal word** Danger

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

citrus terpene

Stoddard solvent

N-methyl-2-pyrrolidone

· **Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H360 May damage fertility or the unborn child.

H372 Causes damage to the central nervous system through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves / eye protection / face protection.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing must not be allowed out of the workplace.

P201 Obtain special instructions before use.

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

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P321 *Specific treatment (see on this label).*

P363 *Wash contaminated clothing before reuse.*

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

P333+P313 *If skin irritation or rash occurs: Get medical advice/attention.*

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

P314 *Get medical advice/attention if you feel unwell.*

P331 *Do NOT induce vomiting.*

P370+P378 *In case of fire: Use for extinction: CO2, powder or water spray.*

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

P405 *Store locked up.*

P403+P235 *Store in a well-ventilated place. Keep cool.*

P501 *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:** Environment protection department.

· **Contact:** Mr. Collins

· **Date of preparation / last revision** 09/15/2015 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

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

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

Asp. Tox. 1: Aspiration hazard, Hazard Category 1