

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date: 09/16/1999

Revision date: 09/14/1999

1 Identification of substance:

• **Product details:**

• **Trade name:** TSO Conditioner
TSO-SC Conditioner

• **Article number:**

1301-904
2600-199
2600-200
2600-235
2600-243
2600-244

• **Manufacturer/Supplier:**

Diagraph Corporation
3401 Rider Trail South
Earth City, MD 63045
Phone: (314) 739-1221
Fax: (314) 770-5700

• **Information department:** Safety / Environmental

• **Emergency information:**

Contact Infotrac: (800) 535 5053 (US only)
International: +1 352 323 3500

2 Composition/Data on components:

• **Chemical characterization**

• **Description:**

Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

64-17-5 ethanol	80-100 %
67-63-0 isopropyl alcohol	5-20 %

3 Hazards identification

• **Hazard description:** Highly flammable

• **Information pertaining to particular dangers for man and environment:**
Highly flammable.

• **Classification system**

The classification was made according to the latest editions of
international substances lists, and expanded upon from company and

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literature data.

- **NFPA Ratings (scale 0-4)**
Health = 1
Fire = 3
Reactivity = 0
- **HMS Rating (scale 0-4)**
Health - 1
Flammability - 3
Reactivity - 0
- **Routes of Entry** Ingestion
- **Target Organs** Liver
- **Irritancy** None known
- **Sensitizing Capability** None known
- **Reproductive Effects** None known
- **Cancer Information** Not known to be carcinogenic.

4 First aid measures

- **After inhalation**
Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact**
Rinse opened eye for several minutes under running water.
- **After swallowing**
Induce vomiting, if person is conscious. Seek medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into water course or sewage system
Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

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7 Handling and storage

- **Handling**
- **Information for safe handling:**
Store in cool, dry place in tightly closed receptacles.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Maximum storage temperature:** 120 F (49 C)
- **Minimum storage temperature:** 35 F (2 C)

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**
No further data; see item 7.

Components with limit values that require monitoring at the workplace:

64-17-5 ethanol

ACGIH TLV: Short-term value: 1880, A4 mg/m³, 1000, A4 ppmNIOSH REL: Short-term value: 1900 mg/m³, 1000 ppmOSHA PEL: Short-term value: 1900 mg/m³, 1000 ppm

67-63-0 isopropyl alcohol

ACGIH TLV: Short-term value: 983 mg/m³, 400 ppmLong-term value: 1230 mg/m³, 500 ppmNIOSH REL: Short-term value: 980 mg/m³, 400 ppmLong-term value: 1225 mg/m³, 500 ppmOSHA PEL: Short-term value: 980 mg/m³, 400 ppm

71-23-8 1-propanol

ACGIH TLV: Short-term value: 492 mg/m³, 200 ppmLong-term value: 614 mg/m³, 250 ppm

Skin

NIOSH REL: Short-term value: 500 mg/m³, 200 ppmLong-term value: 625 mg/m³, 250 ppm

Skin

OSHA PEL: Short-term value: 500 mg/m³, 200 ppm

- **Additional information:**

The lists that were valid during the creation were used as basis.

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- **Personal protective equipment**
- **General protective and hygienic measures**
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Eye protection:** Tightly sealed goggles.

9 Physical and chemical properties:

- | | | | |
|-------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------|--|
| • Form | Liquid | | |
| • Color: | Transparent | | |
| • Odor: | Like alcohol | | |
| • | | | |
| • Change in condition | | | |
| • Melting point/Melting range: | | undetermined | |
| • Boiling point/Boiling range: | | 78 ° C | |
| • Flash point: | | 13 ° C | |
| • Ignition temperature: | | 360 ° C | |
| • 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: | | 2.0 Vol % | |
| • Upper: | | 15.0 Vol % | |
| • Vapor pressure: | at 20 ° C | 59 hPa | |
| • Density: | at 20 ° C | 0.791 g/cm ³ | |
| • Solubility in / Miscibility with | | | |
| • Water: | | Fully miscible | |
| • Solvent content: | | | |
| • Organic solvents: | | 100.0 % | |

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known

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- **Dangerous products of decomposition:**
No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:** None

12 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

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system
Comply with all Federal, State, and Local regulations regarding disposal.
- **Uncleaned packagings:**
- **Recommendation:**
Comply with all Federal, State, and Local regulations regarding disposal.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1170
- **Packing group:** II
- **Proper shipping name (technical name):**
Ethanol solution (Ethyl alcohol solution)
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 3 Flammable liquids
- **Item:** 3b
- **Danger code (Keller):** 33
- **UN-Number:** 1170

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- **Description of goods:** 1170 Ethanol solution (Ethyl alcohol solution)
- **Maritime transport IMDG:**
- **IMDG Class:** 3.2
- **Page:** 3219
- **UN Number:** 1170
- **Packaging group:** II
- **EMS Number:** 3-06
- **MFAG:** 305, 306
- **Marine pollutant:** No
- **Proper shipping name:** Ethanol solution (Ethyl alcohol solution)
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1170
- **Packaging group:** II
- **Proper shipping name:** Ethanol solution (Ethyl alcohol solution)

15 Regulations

- **Product related hazard information:**
The product has been classified and marked in accordance with directives on hazardous materials.
- **Hazard symbols:** Highly flammable
- **Risk phrases:** Highly flammable.
- **Safety phrases:**
Keep out of the reach of children.
Keep container tightly closed and in a well-ventilated place.
Keep away from sources of ignition - No smoking.
If swallowed, seek medical advice immediately and show this container or label.
- **National regulations**
- **Water hazard class:**
Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations**
- **OSHA Regulations**
Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed
OSHA Specifically Regulated Substance (29 CFR 1910.): Not listed
- **Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III, Section 313:**
This product does not contain chemicals listed as toxic chemicals at

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Levels which require reporting under SARA Title III Section 313.

• CONEG:

This product has been tested for heavy metals covered under the various CONEG laws, and does not contain mercury, lead, cadmium, or hexavalent chromium at levels above reportable thresholds:

Mercury (Hg), total: <0.03mg/kg

Lead (Pb), total: <7.7mg/kg

Cadmium (Cd), total: <1.5mg/kg

Chromium (Cr), total: <4.6mg/kg

• Toxic Substances Control Act TSCA Status:

All components of this product are listed in the EPA's Inventory of Chemical Substances as required under the Toxic Substances Control Act (TSCA).

California Proposition 65 (Chemicals known to cause cancer):

This product contains no ingredients on the California Proposition 65 List known to cause cancer.

• California Proposition 65 (Chemicals known to cause reproductive toxicity):

This product contains no ingredients on the California Proposition 65 List known to cause reproductive toxicity.

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 MSDS:** Chemistry
- **MSDS Created By:** Kendall Kessler

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