SAFETY DATA SHEET
TURPENTINE SUBSTITUTE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Product name TURPENTINE SUBSTITUTE
Product No. TTS200, TTS750

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

1.3. Details of the supplier of the safety data sheet
Supplier TETROSYL LIMITED
BEVIS GREEN WORKS
WALMERSLEY
BURY
BL9 6RE
0161 764 5981
0161 797 5899
info@tetrosyl.com

1.4. Emergency telephone number
0161 764 5981

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)

Physical and Chemical Hazards
Flam. Liq. 3 - H226

Human health
EUH066;STOT SE 3 - H336;Asp. Tox. 1 - H304

Environment
Aquatic Chronic 2 - H411

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements
Contains TURPENTINE SUBSTITUTE
Label In Accordance With (EC) No. 1272/2008

Signal Word Danger

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
**TURPENTINE SUBSTITUTE**

**Precautionary Statements**

- **P271** Use only outdoors or in a well-ventilated area.
- **P273** Avoid release to the environment.
- **P280** Wear protective gloves/protective clothing/eye protection/face protection.
- **P501** Dispose of contents/container to ...

**Supplementary Precautionary Statements**

- **P210** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- **P233** Keep container tightly closed.
- **P240** Ground/bond container and receiving equipment.
- **P241** Use explosion-proof electrical equipment.
- **P242** Use only non-sparking tools.
- **P243** Take precautionary measures against static discharge.
- **P261** Avoid breathing vapour/spray.
- **P370+378** In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction.
- **P301+310** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- **P303+361+353** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- **P304+340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- **P312** Call a POISON CENTER or doctor/physician if you feel unwell.
- **P331** Do NOT induce vomiting.
- **P391** Collect spillage.
- **P403+233** Store in a well-ventilated place. Keep container tightly closed.
- **P403+235** Store in a well-ventilated place. Keep cool.
- **P405** Store locked up.

**Supplemental label information**

- **EUH066** Repeated exposure may cause skin dryness or cracking.

### 2.3. Other hazards

#### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1. Substances**

<table>
<thead>
<tr>
<th>TURPENTINE SUBSTITUTE</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS-No.:</td>
<td>EC No.: 919-446-0</td>
</tr>
<tr>
<td>Registration Number:</td>
<td>01-2119458049-33-XXXX</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Classification (EC 1272/2008)</th>
<th>Classification (67/548/EEC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3 - H226</td>
<td>Xn;R65.</td>
</tr>
<tr>
<td>EUH066</td>
<td>N;R51/53.</td>
</tr>
<tr>
<td>Asp. Tox. 1 - H304</td>
<td></td>
</tr>
<tr>
<td>Aquatic Chronic 2 - H411</td>
<td></td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: FIRST AID MEASURES

**4.1. Description of first aid measures**
TURPENTINE SUBSTITUTE

General information
Remove affected person from source of contamination. NOTE! Effects may be delayed. Keep affected person under observation. Move the exposed person to fresh air at once. NOTE! Keep affected person away from heat, sparks and flames! Place unconscious person on the side in the recovery position and ensure breathing can take place. Keep the affected person warm and at rest. Get prompt medical attention.

Inhalation
Remove victim immediately from source of exposure. Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.

Ingestion
Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions. Do not give victim anything to drink if he is unconscious. NOTE! Keep affected person away from heat, sparks and flames!

Skin contact
Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention if any discomfort continues.

Eye contact
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Do not rub eye. Get medical attention if any discomfort continues.

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

General information
The severity of the symptoms described will vary dependant of the concentration and the length of exposure. NOTE! Effects may be delayed. Keep affected person under observation.

Inhalation.
In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects.

Ingestion
May cause discomfort if swallowed. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication. Fumes from the stomach contents may be inhaled resulting in the same symptoms as inhalation. Congestion of the lungs may occur producing severe shortness of breath.

Skin contact
Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

Eye contact
May cause temporary eye irritation.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards
May form explosive mixture with air at very high concentration.

Specific hazards
Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).
5.3. Advice for firefighters

Special Fire Fighting Procedures
No specific fire fighting procedure given.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
In case of inadequate ventilation, use respiratory protection. Do not smoke, use open fire or other sources of ignition. Avoid contact with skin and eyes. In case of spills, beware of slippery floors and surfaces. For personal protection, see section 8. Avoid inhalation of vapours and contact with skin and eyes.

6.2. Environmental precautions
Do not discharge into drains, water courses or onto the ground. Prevent entry into drains. Avoid discharge to the aquatic environment. The product should not be dumped in nature but collected and delivered according to agreement with the local authorities.

6.3. Methods and material for containment and cleaning up
For waste disposal, see section 13. Stop leak if possible without risk. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Provide ventilation and confine spill. Do not allow runoff to sewer. Cover large spillages with alcohol-resistant foam. Absorb with inert, damp, non-combustible material, then flush area with water. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections
For waste disposal, see section 13. For personal protection, see section 8.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Read and follow manufacturer's recommendations. Eliminate all sources of ignition. Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Do not eat, drink or smoke when using the product. Avoid inhalation of vapours/spray and contact with skin and eyes. Observe good chemical hygiene practices. Mechanical ventilation or local exhaust ventilation may be required. Provide good ventilation.

7.2. Conditions for safe storage, including any incompatibilities
Keep containers tightly closed. Keep upright. Keep in original container. Avoid contact with oxidising agents. Do not store near heat sources or expose to high temperatures.

7.3. Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.2. Exposure controls
Protective equipment

Engineering measures
Observe occupational exposure limits and minimize the risk of inhalation of vapours. Provide adequate ventilation.
TURPENTINE SUBSTITUTE

Respiratory equipment
If ventilation is insufficient, suitable respiratory protection must be provided. Use respiratory equipment with gas filter, type A2.

Hand protection
For prolonged or repeated skin contact use suitable protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Nitrile gloves are recommended.

Eye protection
Wear approved, tight fitting safety glasses where splashing is probable.

Other Protection
Provide eyewash station. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures
When using do not eat, drink or smoke. Wash hands after contact. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash contaminated clothing before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless.</td>
</tr>
<tr>
<td>Odour</td>
<td>Aromatic hydrocarbons.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Immiscible with water</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>150 - 200°C</td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.785g/cm³ 20°C</td>
</tr>
<tr>
<td>Vapour density (air=1)</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt;5 kPa 20°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>65 (EtEt=1)</td>
</tr>
<tr>
<td>pH-Value, Conc. Solution</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.95 m2/s 40°C</td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Odour Threshold, Lower</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Odour Threshold, Upper</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;38°C CC (Closed cup).</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>&gt;230°C</td>
</tr>
<tr>
<td>Flammability Limit - Lower(%)</td>
<td>0.7</td>
</tr>
<tr>
<td>Flammability Limit - Upper(%)</td>
<td>7</td>
</tr>
<tr>
<td>Partition Coefficient (N-Octanol/Water)</td>
<td>Scientifically unjustified.</td>
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<tr>
<td>Explosive properties</td>
<td>Scientifically unjustified.</td>
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<tr>
<td>Oxidising properties</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

9.2. Other information

None.

Volutility Description Volatile
SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Oxidising materials.

10.2. Chemical stability
Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions
Not relevant

10.4. Conditions to avoid
Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials
Materials To Avoid
Strong oxidising substances.

10.6. Hazardous decomposition products
None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxic Dose 1 - LD 50
>15000 mg/kg (oral rat)

Carcinogenicity:
This substance has no evidence of carcinogenic properties.

Aspiration hazard:
General information
Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Inhalation
Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Ingestion
Harmful: may cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
Skin contact
Not a skin sensitizer.
Eye contact
May cause temporary eye irritation.

Health Warnings
Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.
Route of entry
Ingestion.
Medical Considerations
Risk of chemical pneumonia after aspiration.
ECOTOXICITY
The product contains substances which are toxic to aquatic organisms and which may cause long term adverse
effects in the aquatic environment. The product contains volatile, organic compounds which have a
photochemical ozone creation potential.

12.1. Toxicity
LC 50, 96 Hrs, Fish mg/l 10 - 22mg/l
EC 50, 48 Hrs, Daphnia, mg/l ~22mg/l
IC 50, 72 Hrs, Algae, mg/l 4.1mg/l

12.2. Persistence and degradability
Degradability
The product is biodegradable.

12.3. Bioaccumulative potential
Bioaccumulative potential
No data available on bioaccumulation.
Partition coefficient
Scientifically unjustified.

12.4. Mobility in soil
Mobility:
The product is immiscible with water and will spread on the water surface.
Adsorption/Desorption Coefficient
Not available.

12.5. Results of PBT and vPvB assessment
Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects
Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

General information
Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local
Waste Disposal Authority.

13.1. Waste treatment methods
Confirm disposal procedures with environmental engineer and local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number
UN No. (ADR/RID/ADN) 1300
UN No. (IMDG) 1300
UN No. (ICAO) 1300

14.2. UN proper shipping name
Proper Shipping Name TURPENTINE SUBSTITUTE

14.3. Transport hazard class(es)
ADR/RID/ADN Class 3
ADR/RID/ADN Class Class 3: Flammable liquids.
TURPENTINE SUBSTITUTE

ADR Label No. 3
IMDG Class 3
ICAO Class/Division 3

14.4. Packing group
ADR/RID/ADN Packing group III
IMDG Packing group III
ICAO Packing group III

14.5. Environmental hazards

14.6. Special precautions for user
EMS F-E, S-E
Emergency Action Code 3Y
Hazard No. (ADR) 30
Tunnel Restriction Code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

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

15.2. Chemical Safety Assessment
No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION
Revision Comments
NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision Date 26/01/2012
Revision 10
Supersedes date 19/08/2011 v9
Safety Data Sheet Status Approved.
Risk Phrases In Full
R10 Flammable
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.
TURPENTINE SUBSTITUTE

Hazard Statements In Full

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.
H411 Toxic to aquatic life with long lasting effects.