

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND COMPANY/ UNDERTAKING

Material Name	: Low Aromatic White Spirit/laws
Uses	: Industrial Solvent.
Product Code	: Q3312, Q3327
Supplier	: Chemisol Inc. 3/F Johnson Bldg. #5 D. Muñoz St. Tandang Sora, Quezon City Philippines
Telephone	: (632) 9385388
Fax	: (632) 9383818
Emergency Telephone Number	: (632) 9385388
Other Information	: Shellsol is a trademark owned by Shell Trademark Management B.V. and Shell Brands Inc. and used by affiliates of Royal Dutch Spell plc.

2. HAZARDS IDENTIFICATION

GHS Classification	: Flammable liquids: Category no. 3 Aspiration hazard: Category no. 1 Acute hazards to the aquatic environment: Category no. 2 Chronic hazards to the aquatic environment: Category no. 3
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**GHS Label Elements
Symbol**



Signal Words	: Danger
GHS Hazard Statements	: PHYSICAL HAZARDS: H226: Flammable liquid and vapor. HEALTH HAZARDS: H304: May be fatal if swallowed and enters airways. ENVIRONMENTAL HAZARDS: H401: Toxic to aquatic life. H412: Harmful to aquatic life with long lasting effects.

**GHS Precautionary Statements
Prevention**

:	P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
	P240: Ground/bond container and receiving equipment.
	P241: Use explosion-proof electrical/ventilating/lighting equipment.
	P242: Use only non-sparking tools.
	P243: Take precautionary measures against static discharge.
	P280: Wear protective gloves/protective clothing/eye

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Response	<p>protection/face protection. P273: Avoid release to the environment. : P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P370+P378: In case of fire: Use appropriate media for extinction. P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. P331: Do NOT induce vomiting.</p>
Storage	<p>: P403+P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.</p>
Disposal	<p>: P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.</p>
Other Hazards which do not result in classification	<p>: In use, may form flammable/explosive vapour-air mixture. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s): Auditory system. Repeated exposure may cause skin dryness or cracking. Slightly irritating to respiratory system.</p>
Aggravated Medical Condition	<p>: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin. Respiratory system. Auditory system.</p>

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Synonyms	: LAWS
CAS No.	: 64742-82-1
INDEX No.	: 649-330-00-2
EINECS No.	: 265-185-4

Classification of components according to GHS

Chemical Name	Synonyms	CAS No.	Hazard Class (category)	Hazard statement	Conc.
1,3,5-Trimethyl Benzene		108-67-8	Flam. Liq., 3;STOT SE, 3; Aquatic Chronic,	H226;H335;H411;	0.60 - 3.00
Ethylbenzene		100-41-4	Flam. Liq.,2;Acute Tox.,4;Acute Tox., 5;Skin Corr./Irrit,2; Eye Dam.,2A; Asp. Tox., 1;STOT SE, 3;Aquatic Acute,2; STOT RE, 2;	H225;H332;H303;H315;H319;H304;;H401;H373;	<= 0.30
1,2,4-Trimethyl Benzene		95-63-6	Flam. Liq., 3;Acute Tox., 4; H319, 2; STOTSE, 3;Skin Irrit.,2; Aquatic Chronic, 2;	H226;H332;H319;H335;H315;H411;	2.00 - 9.00

Additional Information : Refer to Chapter 16 for full text of EC R-phrases.

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4. FIRST AID MEASURES

Inhalation	: Remove to fresh air. If rapid recovery does not occur, transport to the nearest medical facility for additional treatment.
Skin Contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: If swallowed, do not induce vomiting; transport to the nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Advice to Physician	: Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal. Call a doctor or poison control center for guidance.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Specific Hazards	: Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Extinguishing Media	: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.
Unsuitable Extinguishing Media	: Do not use water in a jet.
Protective Equipment for Firefighters	: Wear full protective clothing and self-contained breathing apparatus.
Additional Advice	: Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations.

Protective Measures	: Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches, or rivers by using sand earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its low to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Clean Up Methods	: For small liquid spills (<1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to

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evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (>1 drum), transfer by mechanical means such as vacuum truck to a salvage tank recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional Advice

: See chapter 13 for information on disposal. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Vapour may form an explosive mixture with air.

7. HANDLING STORAGE

General Precautions

: Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling

: Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in a well-ventilated area. Ventilate workplace in such a way that the Occupational Exposure Limit (OEL) is not exceeded. Do not empty into drains.

Storage

: Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Bulk storage tanks should be diked (bunded). Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. Storage Temperature: Ambient.

Product Transfer

: Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Electrostatic charges may be generated during pumping operations. Electrostatic discharge may cause fire. If positive displacement pumps are used, these must be fitted with a non-integral pressure relief valve.

Recommended Materials

: For containers, or container linings use mild steel and stainless steel. For container paints, use epoxy paint, zinc silicate paint.

Unsuitable Materials

: Avoid prolonged contact with natural, butyl or nitrile rubbers.

Container Advice

: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Occupational Exposure Limits

In the absence of occupational exposure standards for this product, it is recommended that the following are adopted.

Material	Source	Type	ppm	mg/m3	Notation
RCP Mineral spirits 150- 200	HSPA OEL	TWA (8 h)		30 mg/m3	
Ethylbenzene	ACGIH	TWA	100 ppm		
	ACGIH	STEL	125 ppm		
	PH OEL	CEIL_PH	100 ppm	435 mg/m3	

Additional Information : Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Material Ethylbenzene	Source ACGIH	Hazard Designation Confirmed animal carcinogen with unknown relevance to humans.
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Respiratory Protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with the respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN141. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Hand Protection : Longer term protection: Nitrile rubber gloves
Incidental contact/splash protection: PVC or neoprene rubber gloves. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection : Chemical splash goggles (Chemical monogoggles).

Protective Clothing : Chemical resistant gloves/gauntlets, boots, and apron. Skin protection not ordinarily required beyond standard issue work clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Colourless Liquid.
Odour	: Paraffinic.
pH	: Not applicable.
Boiling point	: Typical 162- 192 °C / 324- 378 °F
Melting/Freezing point	: Not applicable.
Flash point	: Typical 41- 42 °C/ 106- 108 °F (Abel)
Explosion /Flammability	: 0.7- 6.5 % (V)
Limits in air	
Auto-ignition temperature	: 296 °C/ 565 °F (ASTM E-659)

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Vapour pressure	245 °C/ 473 °F (DIN 51794) : Typical 370 Pa at 20 °C/ 68 °F Typical 110 Pa at 0 °C/ 32 °F Typical 1,800 Pa at 50 °C/ 122 °F
Density	: Typical 783 kg/m ³ at 15 °C/ 59 °F (ASTM D-4052)
Water solubility	: Insoluble.
Solubility in other solvents	: Aromatics Miscible. Aliphatics Miscible.
n-octanol/water partition coefficient (log Pow)	: 3.7- 6.7
Kinematic viscosity	: Typical 1.08 mm ² /s at 25 °C/ 77 °F
Vapour density (air=1)	: Data not available.
Coefficient of expansion	: Typical 0.0008/ °C
Dielectric constant	: Typical 2.1 at 20 °C/ 68 °F
Refractive index	: Typical 1.434 at 20 °C/ 68 °F (ASTM D-1218)
Reaction with water	: Not applicable.
Saturated Vapour Concentration (in air)	: 21 g/m ³ (estimated value(s))
Volatile organic carbon content	: 85 % (EC/1999/13)
Evaporation rate (nBuAc=1)	: 0.16 (ASTM D 3539, nBuAc=1) 80 (DIN 53170, di-ethyl ether=1)
Surface tension	: Typical 26.4 mN/m at 20 °C/ 68 °F (ASTM D-971)
Molecular weight	: 140 g/mol

10. STABILITY AND REACTIVITY

Stability	: Stable under normal conditions of use.
Conditions to Avoid	: Avoid heat, sparks, open flames and other ignition sources.
Materials to Avoid	: Strong oxidizing agents.
Hazardous Decomposition Products	: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquid and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on product testing, and/or similar products, and/or components.
Acute Oral Toxicity	: Low Toxicity: LD50 >2000 mg/kg, Rat Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Acute Dermal Toxicity	: Low Toxicity: LD50 >2000 mg/kg, Rat
Acute Inhalation Toxicity	: Low Toxicity: LC50 greater than near-saturated vapour concentration. /4 hours, Rat High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Skin Irritation	: May cause moderate skin irritation (but insufficient to classify).

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	Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.
Eye Irritation	: Essentially non-irritating to eyes.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation to the respiratory system.
Sensitization	: Not a skin sensitizer.
Repeated Dose Toxicity	: Auditory system: prolonged and repeated exposure to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss. Central nervous system: repeated exposure affects the nervous system. Kidney: caused kidney effects in male rats which are not considered relevant to humans.
Mutagenicity	: Not expected to be mutagenic.
Carcinogenicity	: Limited evidence to be carcinogenic effect. (Ethylbenzene)
Reproductive and Developmental Toxicity	: Causes foetotoxicity in animals at doses which are maternally toxic. : Not expected to impair fertility.

12. ECOLOGICAL INFORMATION

Acute Toxicity	
Fish	: Harmful: $10 < LC/EC/IC50 \leq 100$ mg/l
Aquatic Invertebrates	: Harmful: $10 < LC/EC/IC50 \leq 100$ mg/l
Algae	: Toxic: $1 < LC/EC/IC50 \leq 10$ mg/l
Microorganisms	: Expected to be harmful: $10 < LC/EC/IC50 > 100$ mg/l
Mobility	: Floats on water.
Persistence/degradability	: Readily biodegradable. Oxidizes rapidly by photo-chemical reactions in air.
Bioaccumulation	: Has the potential bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Material Disposal	: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.
Container Disposal	: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums recoverer or metal reclaimer.
Local Legislation	: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

IMDG	
Identification number	: UN1300
Proper shipping name	: TURPENTINE SUBSTITUTE
Class/ Division	: 3
Packing group	: III

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Marine pollutant : Yes

IATA (Country variations may apply)

UN No. : 1300
Proper shipping name : Turpentine substitute
Class/ Division : 3
Packing group : III

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

EC Label Name : LOW AROMATIC WHITE SPIRIT
EC Label/EC Number : 265-185-4
EC Classification : Flammable. Harmful. Dangerous for the environment.
EC Annex I Number : 649-330-00-2
EC Symbols : Xn Harmful.
N Dangerous for the environment.
EC Risk Phrases : R10 Flammable.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EC Safety Phrase : S23 Do not breathe vapour.
S24 Avoid contact with skin.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

DSL : Listed.
INV(CN) : Listed.
TSCA : Listed.
EINECS : Listed. 265-185-4
KECI (KR) : Listed. KE-25620

Priority Chemical List (PCL) (DENR Administrative Order No. 98- 58)

Benzene : Listed.

Other Information : 94/69/EC (21st ATP). The benzene content of this product is less than 0.1 %.
Nota P applies. Classification and labeling as carcinogen (R45) is not required.

16. OTHER INFORMATION

R-phrases(s)

R10 Flammable
R11 Highly flammable.
R20 Harmful by inhalation.

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R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R37	Irritating to respiratory system.
R45	May cause cancer.
R46	May cause heritable genetic damage.
R48/23/24/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: May cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

MSDS Version Number	: 1.7
MSDS Effective Date	: 30.04.2012
MSDS Revisions	: A vertical bar () in the left margin indicates an amendment from the previous version.
Uses and Restrictions	: Industrial Solvent.
MSDS Distribution	: The information in this document should be made available to all who may handle the product.
Disclaimer	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.