

MATERIAL SAFETY DATA SHEET

WHITE SPIRIT

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

Material Name : Low Aromatic White Spirit
Uses : Industrial Solvent
Product Code : LAWS

Supplier/ Exporter RAR Resin & Chemical Industries JLT
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2. COMPOSITION/ INFORMATION ON INGREDIENTS

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

Hazardous Components

Chemical Name	CAS	EINECS	Symbol(s)	R-phrase(s)	Conc.
1,2,4-Trimethyl benzene	95-63-6	202-436-9	Xn, N	R10; R20; R36/37/38; R51/53	

3. HAZARDS SUMMARIZING

Health hazards : Vapours may cause drowsiness and dizziness. May cause moderate irritation to skin. Reported exposure may cause skin dryness or cracking.
Harmful: may cause lung damage from prolonged exposure; see Chapter 11 for details. target organ (s): Auditory system. Central nervous system (CNS)

Signs and Symptoms Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/ cracked appearance. Other signs and symptoms of central nervous system(CNS) depression may include headache, nausea, and lack of coordination. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, choking, wheezing, difficulty in breathing, chest congestion and/ or fever.

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Safety hazards

: Auditory system effects may include temporary hearing loss and/ or ringing in the ears.

: Flammable. In use, may form flammable/ explosive vapour - air mixture. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Environmental hazards

: Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

General Information

: In general no treatment is necessary, however, obtain medical advice.

Inhalation

: Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for medical treatment.

Skin Contact

: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

Eye contact

: Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persists, transport to the nearest medical facility for additional treatment

Ingestion

: If swallowed, do not induce vomiting: transport to 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.

5. FIRST AID 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, spread 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. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see chapter 8 of this Material

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: Safety data sheet. Shut off leaks, if possible without personal risk. 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 flow to a safe location for example by using of sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Clean- up Method

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

Additional Advise

: 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. Vapor may form an explosive mixture with air.

7. HANDLING AND STORAGE

General Precautions

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

Handling

: Avoid contact with skin, eyes, and clothing. Extinguishing any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. The vapour in is heavier than the air, apreads along the ground and distant ignition is possible. Ensure electrical continuity by bonding and grounding (earthing) all equipement. restrict line velocity during pumping in order to avoid generation of electrostatic discharge ($\leq 1\text{ m/ sec}$ until fill pipe submerged twiceto its diameter , then $\leq 7\text{ m/ sec}$). Avoid splash filling. DO NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in 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 form other flammable products which are not harmful or toxic to man or to the environment. Storage Temperature: Ambient

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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 twice to 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. 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, stainless steel. For container paints, use epoxy paint, zinc silicate paint.

**Unsuitable Materials
Container Advise**

: Avoid prolonged contact with natural, butyl, or nitrile rubbers.
: 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 CONTROL/ PERSONAL PROTECTION**Occupational Exposure Limits**

Material	Source	Type	ppm	Mg/m ³	Notation
RCP Mineral	EU HSPA	TWA (8h)	350	mg/m ³	

Spirits 150-200**Additional Information**

: Adequate ventilation to control 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 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 deg C (149 deg F) meeting EN141]. 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

: Where hand contact with the product may occur the use of gloves approved to the relevant standards (e.g. Europe: EN374, US F739) made from the following materials may provide suitable chemical protection: Long term protection: Nitrile rubber gloves incidental contact/ splash protection: PVC or neoprene rubber gloves.

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Eye protection	: Monogoggles (EN166) : Chemical splash goggles (chemical monogoggles)
Protective Clothing	: Chemical resistant gloves/ gauntlets, boots, and apron. Skin protection not ordinarily required beyond standards issue work clothes.
Monitoring Methods	: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may be appropriate Examples of sources of recommended air monitoring methods are given below or contact supplier. Further national methods may be available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Colourless liquid
Odour	: Paraffinic
pH	: Not applicable
Boiling point	: 115- 210 °C/ 311- 410 °C
Melting/ Freezing Point	: Not applicable
Flash Point	: Typical 41 - 42 °C/ 106 - 108 °F (Abel)
Explosion / Flammability Limits in air	: 0.7 - 6.5 % (V)
Auto-Ignition temperature	: 296 °C / 565 °F (ASTM E - 659) : 245 °C / 473 °F (DIN 51794)
Specific gravity	: 0.8 at 15 °C / 59 °F
Density	: Typical 783 kg/ m3 at 15 °C / 59 °F (ASTM D - 4052)
Water Solubility	: Insoluble
Solubility in other solvents	: Aromatic Miscible : Aliphatics Miscible
Kinematic viscosity	: Typical 1.08 mm ² / s at 25 °C / 77 °F
Volatile organic carbon Content	: 85 % (EC/1999/ 13)
Physical data Comments	: Aromatic 17- 20 %
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. Strong oxidizing agents.
Hazardous	: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne liquids, solids, liquids, 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: LD 50 >2000 mg/ kg, Rat : Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

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Acute Dermal Toxicity
Acute Inhalation Toxicity

: Low toxicity: LD 50 >2000 mg/ kg, Rat
: Low toxicity: LC 50 greater than the 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 classift).
Prolonged/ repeated contact may cause defatting of the skin which can lead to dermatitis.

Eye Irritation
Respiratory Irritation

: Essentially non-irritating to eyes.
: Inhalation of vapours or mists may cause irritation to the respiratory system.

Sensitization
Repeated Dose Toxicity

: not a skin sensitizer.
: Auditory system: prolonged and repeated exposure to high concentrations have resulted in hearing loss in rates. Solvent abuse and noise interaction in the work environment may cause hearing loss. Central nervous system: repeated exposure affects the nervous system.

Mutagenicity
Carcinogenicity
Reproductive and Developmental Toxicity

kidney: caused kidney effects in male rats which are not considered relevant to humans.
: not expected to be mutagenic.
: Limited evidence of carcinogenic effect. (Ethylbenzene)
: Causes foetotoxicity in animals at doses which are maternall toxic.
: Not expected to impair fertility.

12. ECOLOGICAL INFORMATION

Acute Toxicity
Fish
Aquatic Invertebrates
Algae
Microorganisms
Mobility
Persistence / degradability
Bioaccumulation

: Harmful: $10 < LC/ EC/IC50 \leq 100$ mg/l
: Harmful: $10 < LC/ EC/ IC50 \leq 100$ mg/l
: Toxic: $1 < LC/ EC/IC50 \leq 10$ mg/l
: Expected to be harmful: $10 < LC/EC/IC50 \leq 100$ mg/l
: Floats on water
: Readily biodegradable.
: Oxidises rapidly by photo- chemical reactions in air.
: Has the potential to 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 materials generated to determine the proper waste classification and disposal methods in compliance with with applicable regulations.

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. Send to drum recoverer or metal reclaimer.

Local legislation

: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations maybe more stringent than regional or national requirements and must be complied with.

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14. TRANSPORT INFORMATION

ADR
Class : 3
Packing Group : III
Classification Code : F1
Hazard identification no. : 30
UN no. : 1300
Danger label (primary risk) : 3
Proper shipping name : Turpentine substitute

RID
Class : 3
Packing Group : III
Classification Code : F1
Hazard identification no. : 30
UN no. : 1300
Danger label (primary risk) : 3
Proper shipping name : Turpentine substitute

IMDG
Identification No. : UN 1300
Proper shipping name : Turpentine substitute
Class/ Division : 3
Packing group : III
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 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 : Xn Harmful.
N Dangerous for the environment.
EC Risk Phrase : 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 the skin.
: S61 Avoid release to the environment. refer to special
instructions/ safety data Sheet.

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Other Information

: S 61 if swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
: 94/69/EC (21 st ATP). The benzene content of this product is less than 0.1 %. Nota P applies. Classification and labelling as carcinogen (R45) is not required.

16. OTHER INFORMATION

Additional Information

: This material safety data sheet refers to the regulatory requirements for the EU and does not contain any country specific legislation. The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health. No warranty or safety guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product. For further information, contact your local company or agent.

R-phrase (s)

R10

: Flammable

R20

: Harmful by inhalation

R36/37/38

: Irritating to eyes, respiratory, and skin

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 exposures may cause skin dryness or cracking.

R67

: Vapours may cause drowsiness and dizziness.

MSDS VERSION nUMBER

: 1.6

MSDS Effective Date

: 20.10.2009

MSDS Revisions

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

MSDS Regulations

: The content and format of this safety data sheet is in accordance with Commission Directive 2001/ 58/ EC of 27th July 2001, amending for the second time Commission Directive 91/155/EC.

Uses and Restrictions

: Industrial Solvent.

MSDS Distribution

: The information in this document should be made available to all who may handle the product.

Disclaimer

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