MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name **DURA INDUSTRIAL WHITE SPIRIT, MINERAL TURPENTINE (DI006)**
Synonyms Solvent.
Description Medium aromatic solvent
Dura Paints (PTY) Ltd 5 Wakefield Road; Founders View South; Edenvale; 1610; South Africa.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Class
Classification Moderately Hazardous
Comment Liquid Form
Hazardous and / or other relevant components

A. HAZARDOUS COMPONENTS
Petroleum Hydrocarbons such as Benzene
B. NON HAZARDOUS COMPONENTS

R-PHRASES: R11 – Highly Flammable
R20/22 – Harmful by inhalation and if swallowed.
R36/38 – Irritating to eyes and skin
R45 – May cause cancer.
R48/23/24/25 – Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

Chemical name	CAS-No.	Weight%
Medium Aliphatic Petroleum Solvent	64742-88-7	75.00 – 85.00
Heavy Aromatic Petroleum Solvent	64742-94-5	15.00 – 25.00
Benzene	71-43-2	< 0.10

3. HAZARDS IDENTIFICATION

Emergency response data: Colourless liquid. Flammable. Vapour accumulation could flash and / or explode if in contact with any ignition source. DOT ERG No. 128

GHS Classification:

Health

Acute inhalation toxicity	Hazard category 4	Harmful if inhaled	Warning
Acute oral toxicity	Hazard category 5	May be harmful if swallowed	Warning
Skin irritation	Hazard category2	Irritant	Warning
Eye irritation	Hazard category 2A	Irritant	Warning
Aspiration	Hazard category 1	May cause chemical pneumonitis.	Danger

Environmental

Aquatic toxicity	Hazard category 2	Very toxic to fish, aquatic organisms and wildlife	Warning

Physical

Flammability	Hazard category 3	Flammable liquid and vapour	Warning

Hazard Statements

Flammable liquid and vapour. May be fatal if swallowed and enters airways. Cause eye irritation. Causes skin irritation.

Precautionary Statements

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

Response

IN CASE OF FIRE:	Use carbon dioxide, foam or dry chemical for extinction.
IF INHALED:	Call a POISON CENTRE or doctor immediately.
IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical attention.
IF ON SKIN:	Immediately remove all contaminated clothing. Gently was skin with plenty of soap and water. Launder Contaminated clothing before re-use.
IF SWALLOWED:	Immediately call a POISON CENTRE or doctor.

Storage

Store in a well-ventilated place and keep the container cool and tightly closed**.**

Disposal
Do not discharge into lakes, streams, ponds and ground water supply.

See section 11 for further health effects/toxicological data.

4. FIRST AID MEASURE

Ingestion	Seek immediate medical attention. Do not induce vomiting.
Skin	Wash contact areas with soap and water. Remove contaminated clothing. Dry wipe exposed skin and cleanse with hand cleaner, soap and water. Launder contaminated clothing before reuse. (See Section16 – Injection Injury)
Inhalation	Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with mechanical devise or use mouth-to-mouth resuscitation with a mouthpiece.
Eyes	Flush thoroughly with water. If irritation occurs call a doctor.
Note to doctors	Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Carbon dioxide, foam, dry chemical and water fog.
Special fire fighting procedure	Water spray should only be used to keep fire-exposed containers cool, flush spills away from exposures, disperse vapours and protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, municipal sewers, or drinking water supply.
Special protective equipment for fire fighters	For fires in enclosed areas, fire fighters must use Self-Contained Breathing Apparatus.
Unusual fire and explosive hazards	Flammable. Vapour accumulation could flash or explode if in contact with an open flame.
Products of decomposition	Fumes, smoke and carbon monoxide.
Flash Point	< 35°C (ASTM D-56)
Upper Explosion Limit (UEL)	6.5% (V)
Lower Explosion Limit (LEL)	0.6% (V)
NFPA Hazard ID	Health: 0; Flammability: 3; Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

Procedure if material is Released or spilled	Report spills/releases as required to appropriate authorities.
Methods for cleaning up	LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by shovelling up, or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of absorbed residues as directed in Section 13. WATER SPILL: Eliminate sources of ignition. Warn occupants and/or ships in the downwind areas of fire and explosion hazard, and warn them to stay clear. Consult an expert for the recovery and disposal of material according to local regulations.
Personal precautions	See Section 8.
Environmental precautions	Prevent spills from entering municipal sewers or drains and contact with soil.

7. HANDLING AND STORAGE

Safe handling advice:	Avoid prolonged skin contact. Avoid inhalation of vapours or mists. Use in a well ventilated area away from all ignition sources. Avoid sparking conditions. Ground and bond all transfer equipment.
Storage information:	Store away from all ignition sources in a cool, well ventilated area. This product is a static accumulator, therefore, all storage containers should be grounded and bonded. Drums should also be equipped with self-closing valves, pressure vacuum bungs and flame arresters. Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.
Storage and handling procedures:	To minimize the risk of fire or explosion from discharges, static and/or vapour accumulation, effectively bond and ground product storage and transfer systems.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs)

Components	CAS-No.	Source	TWA	Value		Notations
Heavy Aromatic Petroleum Solvent	64742-94-5	ACGIH TLV		525mg/m3	100 ppm	

LTEL: Long Term Exposure Limits – Time weight Average (TWA) over 8 hours.

STEL: Short Term Exposure Limits – Time Weight Average (TWA) over 15 Minutes

Note: Limits shown for guidance only. Follow applicable regulations.

Personal Protective Equipment (PPE)

Engineering controls	Use in well ventilated area. Explosive-proof ventilation equipment with local exhaust is desirable.
Respiratory protection	Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the recommended exposure limit. Self-Contained Breathing Apparatus may be required for use in confined or enclosed spaces.
Eye protection	Normal industrial eye protection practices should be employed.
Skin and body protection	Impervious gloves must be worn. Good personal hygiene practices should always be followed. Good personal hygiene practices should always be followed

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid	**Colour:**	Colourless
Odour:	Solvent	**Water solubility:**	Negligible
Boiling point:	>140ºC	**Flash point:**	>35ºC (ASTM D-56)
Upper Explosion Limit (UEL):	6.5% (V)	**Vapour pressure:**	< 10 hPa
Lower Explosion Limit (LEL):	0.6% (V)	**Density:**	0.7870 g/cm3 @ 20ºC (ASTM D-4052)
Viscosity, kinematic:	< 3mm2/s @ 40ºC (ASTM D-445)		

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous thermal decomposition products:	Fumes, smoke and carbon monoxide.
Materials to avoid:	Strong oxidizers.
Conditions to avoid	Heat, sparks, flame and build up of static electricity.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	(Rats): Practically non-toxic (LD50: greater than 2000mg/kg). Based on testing of similar Products and/or components. Warning Hazard category 5. Practically non-toxic, but when swallowed can cause lung damage.
Acute dermal toxicity	(Rabbits): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components. Warning Hazard category 5. May be harmful in contact with skin.
Acute inhalation toxicity	(Rats): Harmful (LC50: greater than 10 but less than 20mg/l) 4 hours. Based on testing of similar products and/or the components. Warning Hazard category 4. Harmful if inhaled.
Skin irritation	(Rabbits): Irritant. (Primary Irritation Index: greater than 3 but less than 6). Based on testing of similar products and/or the components. Warning Hazard category 2. Causes mild skin irritation.
Eye irritation	(Rabbits): Mild irritant. (Draize score: greater than 6 but 15 or less). Based on testing of similar products and/or the components. Warning Hazard category 2A. Causes eye irritation.
Respiratory and skin sensitization	This product was not a skin sensitizer when tested in a Modified Buehler Guinea Pig Sensitization Assay.
Germ cell mutagenicity	
Carcinogenicity	Certain straight-run middle distillates have been found to produce skin tumors in laboratory mouse skin-painting tests, but these have usually indicated that the irritation can produce tumours. Therefore, if the precautions outlined in this SDS are followed to minimize repeated or prolonged skin contact which could cause irritation, these oils should pose no carcinogenic hazard to humans.
Reproductive toxicity (Teratogenicity)	No teratogenic effects would be expected from dermal exposure, based on laboratory development toxicity studies of major components in this formulation and/or of similar composition. .
Specific target organ toxicity (STOT) - single exposure	Respiratory irritation, dizziness, nausea and loss of consciousness.
Specific target organ toxicity (STOT) – Repeated exposure	Prolonged repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Animal studies with similar materials by inhalation for 12 months showed no significant neurotoxic, blood, kidney or other effects.
Aspiration hazard	Material if aspirated into the lungs may cause chemical pneumonitis. Warning Hazard Category 1.

12. TOXICOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	(Salmon) LC/EC50: 8.1 mg/l at 96 hours. .
Toxicity to aquatic organisms	(Daphnia magna) LC/EC50: 6mg/l at 48 hours. (Green algae) LC/EC50: 9.4 mg/l at 8 hours.

Elimination information (persistence and degradability)

Biodegradability	Not established.

Mobility	Not established.
Bioaccumulation	Not established.

Further information on ecology

Remarks	Toxic to fish, aquatic organisms and wildlife. Do not discharge into lakes, streams, ponds and ground water supply.

13. DISPOSAL CONSIDERATIONS

Waste disposal	Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and considerations of product characteristics at time of disposal.
Contaminated packaging	Empty containers retain residue (liquid and/or vapour) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.
Other regulations	Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity, or toxicity as determined by the Toxicity Characteristics Leaching Procedure (TCLP).
Flash point	< 35 ºC (ASTM D-56)

14. TRANSPORT INFORMATION

Static Accumulator (50 picosiemens or less):	Yes

15. REGULATORY INFORMATION

US OSHA Hazard Communication Standard	Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined to be Hazardous.
Governmental Inventory Status	All components comply with TSCA, EINECS/ELINCS, AICS, METI, DSL, KECI, ENCS, PICCS and IECSC
EU Labelling	Product is dangerous as defined by the European Union Dangerous Substances/Preparations Directives
Symbols	F, Xn, X1 Flammable, Harmful
R-Phrase (S)	R10, R65, R38, R51/53 Flammable. Harmful: may cause lung damage if swallowed. Irritating to the skin. Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
S-Phrase (S)	S24,S36/37, S43, S62 Avoid contact with the skin. Wear suitable protective clothing and gloves. In case of fire use foam/dry powder/carbon dioxide. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Note	Contains straight-run Kerosene.

SARA

U.S. Superfund Amendments and Reauthorization Act SARA Title III	This product contains no “EXTREMELY HAZARDOUS SUBSTANCES”.
SARA (311/312) Reportable Hazard Categories	Fire Chronic
SARA (313) Toxic Release	Benzene (71-43-2) – Conc < 0.1%

Chemical Name	CAS-No.	Concentration [%]	List Citations
Medium Aliphatic Petroleum Solvent	64742-88-7	375.00 – 85.00	18, 19, 20, 21, 23, 25
Heavy Aromatic Petroleum Solvent	64742-94-5	15.00 – 25.00	1, 18, 19, 20, 21, 23, 25
Benzene	71-43-2	< 0.10	1, 2, 4, 6, 9, 10, 16, 17, 18, 19, 20, 21, 22,23, 24, 25,26

1 – ACGIH ALL	6 = IARC 1	11 = TSCA 4	17 = CA P65	22 = MI 293
2 = ACGIH A1	7 = IARC 2A	12 = TSCA 5a2	12 = CA RTK	23 = MN RTK
3 = ACGIH A2	8 = IARC 2B	13 = TSCA 5e	19 = FL RTK	24 = NJ RTK
4 = NTP CARC	9 = OSHA CARC	14 = TSCA 6	20 = IL RTK	25 = PA RTK
5 = NTP SUS	10 = OSHA Z	15 = TSCA 12b	21 = LA RTK	26 = RI RTK

Code Key: CARC = Carcinogen; SUS = Suspected Carcinogen

16. OTHER INFORMATION

INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a doctor as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extend of injury.

This data is offered in good faith as typical values and are not as a product specification. No warranty, whether expressed or implied is made. The recommended handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific content of the intended use.

END OF MSDS

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