

B AND R PRODUCTS (PTY) LTD

Supreme Paint Suppliers (Pty) Ltd

Reg. No. 80/09849/07

Manufacturers and Distributors of Top Quality Paints and Solvents

P.O. BOX 1633
RANDBURG
2125
SOUTH AFRICA

PHONE: 027 11 864-1301/1302
027 11 864-1036/1393
FAX: 027 11 864-1390
WEB SITE: www.bandr.co.za
E-MAIL : bandr@icon.co.za

Director: B. J. Rodd

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BENZINE LOCAL SALES SPECIFICATION, PRODUCT INFORMATION AND SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Benzine
Product use : Solvent
UN number : 1993

2. HAZARDS IDENTIFICATION

Pictogram



Signal Word: Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 Do not breathe vapour/ spray.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P501 Dispose of contents/ container in accordance with national regulations

Ventilation requirements	Area must be well ventilated
Respiratory (in detail)	Double mask respirator
Eyes	Safety goggles
Gloves	Rubber gloves

3. COMPOSITION/INFORMATION ON INGREDIENTS

Light Aliphatic Petroleum Solvent
 n-Hexane 110-54-3 15.00
 Benzene 71-43-2 < 0.10
 See Section 8 for Exposure Limits (if applicable).

3. FIRST AID MEASURES

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 device or use mouth-to-mouth resuscitation with a mouthpiece.
 Skin contact : 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 Section 16 - Injection Injury)
 Eye contact : Flush thoroughly with water. If irritation occurs call a doctor.
 Ingestion : Seek immediate medical attention. Do not induce vomiting.
 Note to doctors : Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.

4. FIRE-FIGHTING MEASURES

Extinguishing media : Carbon dioxide, foam, dry chemical and water fog.
 Special fire fighting procedure
 : Evacuate area. For large spills, fire fighting foam in sufficient quantities should be applied to blanket the flammable product surface. 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 firefighters
 : For fires in enclosed areas, fire fighters must use Self-Contained Breathing Apparatus.
 Unusual fire and explosive hazards
 : Highly flammable. Vapour accumulation could flash or explode if in contact with an open flame.
 Products of decomposition : Fumes, smoke and carbon monoxide.
 Flash Point : < 0 °C (ASTM D-56)

Upper Explosion Limit (UEL) : 9.0 %(V)
Lower Explosion Limit (LEL) : 0.6 %(V)
NFPA Hazard Id : Health: 0; Flammability: 3; Reactivity: 0

5. ACCIDENTAL RELEASE MEASURES

Procedure if material is released or spilled

: Report spills/releases as required to appropriate authorities. The reportable quantity of n-hexane is 0.5kg. If this quantity is released within a 24-hour period, it is required to notify the National Response Centre immediately. [40 CFR 302.6]

Methods for cleaning up : LAND SPILL: Shut off source taking normal safety precautions. Take

measures to minimize the effects on ground water. Recover by pumping using explosion-proof equipment or contain spilled liquid 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

Shelf life : 6 months

Safe handling advice : Harmful in contact with or if absorbed through the skin. Avoid inhalation of vapours or mists. Use in well ventilated area away from all ignition sources.

Storage information : Store away from all ignition sources in a cool, well ventilated area.

Outside or detached storage area, with an automatic sprinkling system, is preferred. 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

Light Aliphatic Petroleum Solvent

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. Respirator with a vapour filter (EN 141) is recommended.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.
Colour : Colourless
Odour : Solvent
Solubility : Negligible
Boiling point : > 50 °C
Flash Point : < 0 °C (ASTM D-56)
Upper Explosion Limit (UEL) : 9.0 %(V)
Lower Explosion Limit (LEL) : 0.6 %(V)
Vapour pressure : 115 hPa
Density : 0.66 g/cm³ @ 20 °C (ASTM D-4052)
Viscosity, kinematic : < 7.5 mm²/s @ 40 °C (ASTM D-445)

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : (Rats): Practically non-toxic (LD50: Greater than 2000 mg/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): Toxic (LC50: greater than 2 but 10mg/l or less) 4 hours. Based on testing products and/or components. Danger Hazard category 3. Toxic 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 3. 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 2B. 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 : This product tested negative in a series of mutagenic tests.

Carcinogenicity : Certain straight-run middle distillates have been found to produce skin tumors in laboratory mouse skin-painting tests, but these have usually

been associated with a high level of skin irritation. Laboratory tests have 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)

: Negative in a series of genetic assays and teratological studies.

Specific target organ toxicity : Respiratory irritation, dizziness, nausea and loss of consciousness.

(STOT) - single exposure

Specific target organ toxicity

(STOT) - repeated exposure

: This product contains n-Hexane. Overexposure may cause progressive and potentially irreversible damage to the peripheral nervous system(peripheral neuropathy), particularly in the limbs. Paralysis may result. Simultaneous exposure to the vapours Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) with n-Hexane, intensifies the associated neuropathy. 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.

Danger Hazard category 1.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish : (Salmon) LC/EC50: 8.1 mg/l at 96 hours.

Toxicity to aquatic organisms

: (Daphnia magna) LC/EC50: 6 mg/l at 48 hours.

(Green algae) LC/EC50: 9.4 mg/l at 8 hours.

Elimination information (persistence and degradability)

Biodegradability : Readily Biodegradable.

Mobility : Water solubility: 500 mg/l @ 20 C.

Bioaccumulation : Bioconcentration factor (BCF) < 100.

Further information on ecology

Remarks : In the absence of specific environmental data for this product, this assessment is based on information for representative substances.

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 Characteristic Leaching Procedure (TCLP).

Flash Point : < 0 °C (ASTM D-56)

14. TRANSPORT INFORMATION

ADR

Proper shipping name : FLAMMABLE LIQUIDS n.o.s. (CONTAINS n-HEXANE)

UN number : 1993

Class : 3

Letter : F

Packing group : II

Labelling number : 3

Product Reportable Quantity : 300 kg

CFR

Proper shipping name : FLAMMABLE LIQUIDS n.o.s. (CONTAINS n-HEXANE)

UN number : 1993

Class : 3

Letter : F

Packing group : II

Labelling number : 3

Product Reportable Quantity : 300 kg

IATA_C

Proper shipping name : FLAMMABLE LIQUIDS n.o.s. (CONTAINS n-HEXANE)

UN number : 1993

Class : 3

Letter : F

Packing group : II

Labelling number : 3

Product Reportable Quantity : 300 kg

IMDG

Proper shipping name : FLAMMABLE LIQUIDS n.o.s. (CONTAINS n-HEXANE)

UN number : 1993

Class : 3

Letter : F

Packing group : II

Labelling number : 3

Product Reportable Quantity : 300 kg

Marine pollutant : Marine Pollutant

Medical First Aid Guide

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, Xi

Highly flammable, Harmful, Irritant

R-Phrase(s) : R20/22, R36/38

Harmful by inhalation and if swallowed., Irritating to eyes and skin.

S-Phrase(s) : S16, S26, S29, S33, S36/37/39, S62

Keep away from sources of ignition - No smoking., In case of contact with eyes, rinse immediately with plenty of water and seek medical advice., Do not empty into drains., Take precautionary measures against static discharges., Wear suitable protective clothing, gloves and eye/face protection., If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Note : Contains n-Hexane.

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

Chemicals:

: Benzene (71-43-2) - Conc < 0.1 %.

The following product ingredients are cited on the lists below

Chemical name CAS-No. Concentration [%] List Citations

Light Aliphatic Petroleum Solvent 64742-89-8 85.00 1, 18, 19, 20, 21, 23, 25

n-Hexane 110-54-3 15.00 1, 10, 18, 19, 20, 21, 23, 25, 26

Benzene 71-43-2 < 0.10 1, 2, 4, 6, 9, 10, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

Regulatory List Searched

1 = ACGIH ALL 6 = IARC 1 11 = TSCA 4 17 = CA P65 22 = MI 293

2 = ACGIH A1 7 = IARC 2A 12 = TSCA 5a2 18 = 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

Note: Engen products do not contain PCBs.

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 extent of injury.

Empty container may contain product residue, including flammable or explosive vapours. Do not cut, puncture, or weld on or near container. All label warnings and precautions must be observed until container has been thoroughly cleaned or destroyed.

Note: No significant changes have been made to this Safety Data Sheet since the previous date.

16. Other information

Although the information contained herein is presented in good faith and is to the best of B&R Products knowledge true and accurate, it is made for informational purposes only and without any warranty whatsoever. Due to the special nature of the product and its applications B&R Products does not accept any responsibility or liability whatsoever which may result from the use of this information.

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