Miraplate liquid

Safety Data Sheet

According to SANS 10234:2008 and SANS 11014:2010

Issue date:16/01/2020 Revision date: : Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Miraplate liquid
Type of product	:	Polishing agent
Product code	:	SH44, SH297, SH09, SH21, SH08
Product group	:	Trade product

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

No additional information available

1.3. Supplier's details

Manufacturer
Shield Chemicals (Pty) Ltd
9 London Rd
Apex
P.O. Box 1939
1501 Benoni - South Africa
T (011) 421 7111
info@shieldchem.co.za

1.4. Emergency telephone number

Emergency number : (011) 421 7111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 3	H316
Germ cell mutagenicity, Category 1B	H340
Carcinogenicity, Category 1B	H350
Specific target organ toxicity — Repeated exposure, Category 1	H372
Hazardous to the aquatic environment — Acute Hazard, Category 2	H401
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

Full text of H statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :

GHS02

GHS08

Signal word (GHS-ZA) : Danger

Hazardous ingredients : nonane; Undecane; Decane; Naphtha (petroleum), hydrodesulfurized heavy / Naphtha (petroleum), hydrodesulfurized heavy; Kerosine (petroleum); heptane; octane; methylcyclohexane; toluene; xylene

Hazard statements (GHS-ZA) : H226 - Flammable liquid and vapour.
H316 - Causes mild skin irritation
H340 - May cause genetic defects.
H350 - May cause cancer.
H372 - Causes damage to organs through prolonged or repeated exposure.
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (GHS-ZA) : P201 - Obtain special instructions before use.
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.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.

P260 - Do not breathe vapours.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313 - IF exposed or concerned: Get medical advice.
P314 - Get medical advice if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice.
P370+P378 - In case of fire: Use carbon dioxide (CO2), extinguishing powder, foam to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Causes mild skin irritation,Harmful to aquatic life,Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
nonane	(CAS-No.) 111-84-2	6.0 - 12.0	Flam. Liq. 3, H226 Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 STOT RE 2, H373 Aquatic Acute 1, H400
Decane	(CAS-No.) 124-18-5	6.0 - 12.0	Flam. Liq. 3, H226 Acute Tox. 5 (Dermal), H313
Undecane	(CAS-No.) 1120-21-4	2.0 -8.0	Flam. Liq. 4, H227 Acute Tox. 5 (Dermal), H313
Naphtha (petroleum), hydrodesulfurized heavy / Naphtha (petroleum), hydrodesulfurized heavy	(CAS-No.) 64742-82-1	1.0 - 3.0	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Muta. 1B, H340 Carc. 1B, H350 STOT RE 1, H372 Asp. Tox. 1, H304
Kerosine (petroleum)	(CAS-No.) 8008-20-6	0.1 - 1.0	Flam. Liq. 3, H226 Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 STOT RE Not classified Asp. Tox. 1, H304
heptane	(CAS-No.) 142-82-5	0.2 - 0.9	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
octane	(CAS-No.) 111-65-9	0.1 - 0.5	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
methylcyclohexane	(CAS-No.) 108-87-2	0.2 - 0.9	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
toluene	(CAS-No.) 108-88-3	0.01 - 0.09	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
xylene	(CAS-No.) 1330-20-7	0.01 - 0.09	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact : Irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methylcyclohexane (108-87-2)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Methylcyclohexane
OEL TWA (mg/m³)	1600 mg/m³
OEL TWA (ppm)	400 ppm
OEL STEL (mg/m³)	2000 mg/m³
OEL STEL (ppm)	500 ppm
Regulatory reference	Government Notice. R: 1179
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Methylcyclohexane
OEL TWA (mg/m³)	1600 mg/m³

methylcyclohexane (108-87-2)	
OEL TWA (ppm)	400 ppm
OEL STEL (mg/m³)	2000 mg/m³
OEL STEL (ppm)	500 ppm
Regulatory reference	Government Notice No. R 904

toluene (108-88-3)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Toluene
OEL TWA (mg/m³)	188 mg/m³
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m³)	560 mg/m³
OEL STEL (ppm)	150 ppm
Remark	Sk
Regulatory reference	Government Notice. R: 1179
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Toluene
OEL TWA (mg/m³)	188 mg/m³
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m³)	560 mg/m³
OEL STEL (ppm)	150 ppm
Remark	Sk (Danger of cutaneous absorption)
Regulatory reference	Government Notice No. R 904

xylene (1330-20-7)	
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Xylene, o-, m-, p- or mixed isomers
OEL TWA (mg/m³)	218 mg/m³
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m³)	435 mg/m³
OEL STEL (ppm)	100 ppm
Remark	Sk (Danger of cutaneous absorption)
Regulatory reference	Government Notice No. R 904

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves

Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Viscous liquid.

Colour : light brown.

Odour : No data available

Odour threshold : No data available

pH : 8.5 - 9.5

pH solution : No data available

Relative evaporation rate (butylacetate=1) : No data available

Relative evaporation rate (ether=1) : No data available

Melting point : Not applicable

Freezing point : No data available

Boiling point	:	No data available
Flash point	:	≈ 45 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	No data available
Vapour pressure at 50 °C	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Relative density of saturated gas/air mixture	:	No data available
Density	:	No data available
Relative gas density	:	No data available
Solubility	:	No data available
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	3600 - 4600 mPa·s
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available
Lower explosive limit (LEL)	:	No data available
Upper explosive limit (UEL)	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

nonane (111-84-2)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	17 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), 95% CL: 14 - 21

Undecane (1120-21-4)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	>= 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Decane (124-18-5)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Decane (124-18-5)	
LD50 dermal rabbit	>= 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Naphtha (petroleum), hydrodesulfurized heavy / Naphtha (petroleum), hydrodesulfurized heavy (64742-82-1)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Kerosine (petroleum) (8008-20-6)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.1175 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	> 5.28 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), 95% CL: 0,42 -

heptane (142-82-5)	
LD50 oral rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal)
LC50 inhalation rat (mg/l)	> 29.29 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))

octane (111-65-9)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	> 24.88 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Causes mild skin irritation.
pH: 8.5 - 9.5

Serious eye damage/irritation : Not classified
pH: 8.5 - 9.5

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

nonane (111-84-2)	
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	24.3 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (subchronic, oral, animal/male, 90 days)	100 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Kerosine (petroleum) (8008-20-6)	
NOAEL (oral, rat, 90 days)	750 mg/kg bodyweight Animal: rat, Animal sex: female
NOAEC (inhalation, rat, vapour, 90 days)	>= 0.024 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

octane (111-65-9)	
NOAEC (inhalation, rat, vapour, 90 days)	24.3 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

nonane (111-84-2)	
EC50 Daphnia 1	0.2 mg/l Test organisms (species): Daphnia magna
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.17 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

heptane (142-82-5)	
BCF other aquatic organisms 1	552 (BCFBAF v3.00, Calculated value)
Log Pow	4.66 (Experimental value)
Log Koc	2.38 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

octane (111-65-9)	
EC50 Daphnia 1	0.3 mg/l Test organisms (species): Daphnia magna
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.17 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Miraplate liquid	
Persistence and degradability	No additional information available

heptane (142-82-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.92 g O_2 /g substance
Chemical oxygen demand (COD)	0.06 g O_2 /g substance
ThOD	3.52 g O_2 /g substance
BOD (% of ThOD)	> 0.5 (5 day(s), Literature study)

12.3. Bioaccumulative potential

Miraplate liquid	
Bioaccumulative potential	No additional information available

heptane (142-82-5)	
BCF other aquatic organisms 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology
Log Koc	See section 12.1 on ecotoxicology
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

12.4. Mobility in soil

Miraplate liquid	
Mobility in soil	No additional information available

heptane (142-82-5)	
Surface tension	19.66 mN/m (25 °C)
Log Pow	See section 12.1 on ecotoxicology
Log Koc	See section 12.1 on ecotoxicology
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3295	3295	3295
14.2. Proper Shipping Name		
HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.	Hydrocarbons, liquid, n.o.s.
14.3. Transport hazard class(es)		
3	3	3

SANS	IMDG	IATA
		 Not applicable
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No :	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Special provisions (SANS)	: 223
Limited quantities (SANS)	: 5 L
Limited quantities (SANS)	: 5 L
Packagings, large packagings and IBCs Packing instructions (SANS)	: P001, IBC03, LP01
Portable tank and bulk containers instructions (SANS)	: T4
Portable tank and bulk container special provisions (SANS)	: TP1, TP29

- IMDG

Special provisions (IMDG)	: 223
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Immiscible with water.

- IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3, A224
ERG code (IATA)	: 3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

Issue date : 16/01/2020

Full text of H-statements:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H227	Combustible liquid
H303	May be harmful if swallowed

H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H313	May be harmful in contact with skin
H315	Causes skin irritation.
H316	Causes mild skin irritation
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS South Africa

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.