

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010 Issue date: 5/27/2024 Revision date: 5/27/2026 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form Trade name Type of product Product code Product group

MixtureDiesel Injector CleanerInjector cleaner

: SH211

: Trade product

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

:

Use of the substance/mixture

1.3. Supplier's details

Manufacturer

Shield Chemicals (Pty) Ltd 9 London Rd Apex P.O. Box 1939 1501 Benoni – Gauteng South Africa T (011) 421 7111 Contact: Jayson Clark

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 1	H224	
Skin corrosion/irritation, Category 2	H315	
Specific target organ toxicity - Single exposure, Category 3, Narcosis	H336	
Specific target organ toxicity – Repeated exposure, Category 2	H373	
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400	
Hazardous to the aquatic environment - Chronic Hazard, Category 1	H410	
Full text of H-statements: see section 16		

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)

Signal word (GHS-ZA) Hazardous ingredients Hazard statements (GHS ZA)

Precautionary statements (GHS ZA)



- : Danger
- : hexane, heptane, n-pentane
- : H224 Extremely flammable liquid and vapour
- H315 Causes skin irritation
- H336 May cause drowsiness or dizziness
- H373 May cause damage to organs through prolonged or repeated exposure
- H410 Very toxic to aquatic life with long lasting effects
- 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.

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

	 P241 - Use explosion-proof equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe dusts or mists. P261 - Avoid breathing vapours. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear eye protection, protective clothing, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of soap and water IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. P319 - Get medical help if you feel unwell. P321 - Specific treatment (see on this label). P332+P317 - If skin irritation occurs: Get medical help. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use sand, foam, alcohol resistant foam to extinguish. P391 - Collect spillage. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents and container to a hazardous or special waste collection point.
2.3. Other hazards Adverse physicochemical, human health and	: May cause damage to organs through prolonged or repeated exposure, May cause
environmental effects	drowsiness or dizziness, Harmful in contact with skin, Causes skin irritation, Very toxic 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
hexane	CAS-No.: 110-54-3	39.0 - 80.0	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 Skin Irrit. 2, H315 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
heptane	CAS-No.: 142-82-5	19.0 - 30.0	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

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

Name	Product identifier	%	Classification according to the United Nations GHS
n-pentane	CAS-No.: 109-66-0	9.0 - 20.0	Flam. Liq. 2, H225 Acute Tox. 5 (Oral), H303 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

SECTION 4: First aid measures				
4.1. Description of first aid measures				
First-aid measures general First-aid measures after inhalation First-aid measures after skin contact	 Call a poison center or a doctor if you feel unwell. Remove person to fresh air and keep comfortable for breathing. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. 			
First-aid measures after eye contact First-aid measures after ingestion	 Rinse eyes with water as a precaution. Call a poison center or a doctor if you feel unwell. 			
4.2. Most important symptoms and effe	cts, both acute and delayed			
Symptoms/effects Symptoms/effects after skin contact	May cause drowsiness or dizziness.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					
Hazardous decomposition products in case of fire	: Toxic fumes may be released.				
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 me	easures
6.1. Personal precautions, protective e	equipment and emergency procedures
No additional information available	
6.1.1. For non-emergency personnel	
Emergency procedures	: Ventilate spillage area. Do not breathe vapours. Avoid contact with skin, eyes and clothing.
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.

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

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	: Do not breathe vapours. Use only outdoors or in a well-ventilated area. Do not get in eyes on skin, or on clothing. 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 locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

hexane (110-54-3)				
South Africa - Occupational Exposure Limits (Airborne Pollutants)				
Local name	n-Hexane			
OEL TWA	70 mg/m ³			
OEL TWA	20 ppm			
Regulatory reference Government Notice No. R 904				

8.2. Appropriate engineering controls

Appropriate engineering controls	
Environmental exposure controls	

: Ensure good ventilation of the work station.: Avoid release to the environment.

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

Hand protection	
Eye protection	
Skin and body protection	
Respiratory protection	

- : Protective gloves: Safety glasses
- : Wear suitable protective clothing
- : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



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 Appearance Colour	: Liquid : Liquid. : clear. red.	

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

Odour	:	No data available
Odour threshold	:	No data available
рН	:	No data available
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	:	≥ 20 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	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
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Partition coefficient n-octanol/water (Log Kow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	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.

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

SECTION 11: Toxicological information	
11.1. Information on toxicological effects	
Acute toxicity (oral):Acute toxicity (dermal):Acute toxicity (inhalation):	Not classified Not classified Not classified
hexane (110-54-3)	
LD50 oral rat	16000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 3350 mg/kg bodyweight (Equivalent or similar to OECD 402, 4 h, Rabbit, Male, Read- across, Dermal)
LC50 Inhalation - Rat [ppm]	> 5000 ppm (Equivalent or similar to OECD 403, 24 h, Rat, Male, Experimental value, Inhalation (vapours))
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	> 29.29 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
n-pentane (109-66-0)	
LD50 oral rat	> 2000 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 20 mg/l air (4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
Skin corrosion/irritation :	Causes skin irritation.
Serious eye damage/irritation :	Not classified
Respiratory or skin sensitisation :	Not classified
Germ cell mutagenicity :	Not classified
Carcinogenicity : Reproductive toxicity :	Not classified Not classified
STOT-single exposure :	May cause drowsiness or dizziness.
hexane (110-54-3)	
STOT-single exposure	Not available
heptane (142-82-5)	
STOT-single exposure	Not available
n-pentane (109-66-0)	
STOT-single exposure	Not available
STOT-repeated exposure :	May cause damage to organs through prolonged or repeated exposure.
hexane (110-54-3)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard :	Not classified
hexane (110-54-3)	
Animal studies and expert judgment for classification	False
heptane (142-82-5)	
Animal studies and expert judgment for classification	False
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Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

n-pentane (109-66-0)	
	False

SECTION 12: Ecological information		
12.1. Toxicity		
Hazardous to the aquatic environment, short-term : (acute)	Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.	
hexane (110-54-3)		
BCF - Fish [1]	501.187 (Other, Pimephales promelas, QSAR)	
Partition coefficient n-octanol/water (Log Pow)	4 (Experimental value, Equivalent or similar to OECD 107, 20 °C)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.34 (log Koc, QSAR)	
heptane (142-82-5)		
BCF - Other aquatic organisms [1]	552 (BCFBAF v3.00, Calculated value)	
Partition coefficient n-octanol/water (Log Pow)	4.66 (Experimental value)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.38 (log Koc, SRC PCKOCWIN v2.0, Calculated value)	
n-pentane (109-66-0)		
LC50 - Fish [1]	4.26 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, GLP)	
EC50 - Crustacea [1]	2.7 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)	
ErC50 algae	10.7 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Scenedesmus sp., Static system, Fresh water, Experimental value, GLP)	
BCF - Fish [1]	171 (Pimephales promelas, QSAR)	
Partition coefficient n-octanol/water (Log Pow)	3.45 (Experimental value, Other, 25 °C)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.9 (log Koc, QSAR)	
(Log Koc) 12.2. Persistence and degradability		

Diesel Injector Cleaner			
Persistence and degradability	No additional information available		
hexane (110-54-3)			
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water. 3.52 g O ₂ /g substance		
ThOD			
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)		

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

n-pentane (109-66-0)			
Persistence and degradability	Readily biodegradable in water.		
12.3. Bioaccumulative potential			
Diesel Injector Cleaner			
Bioaccumulative potential	No additional information available		
hexane (110-54-3)			
BCF - Fish [1]	501.187 (Other, Pimephales promelas, QSAR)		
Partition coefficient n-octanol/water (Log Pow)	4 (Experimental value, Equivalent or similar to OECD 107, 20 °C)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.34 (log Koc, QSAR)		
Bioaccumulative potential	Potential for bioaccumulation ($500 \le BCF \le 5000$).		
heptane (142-82-5)			
BCF - Other aquatic organisms [1]	552 (BCFBAF v3.00, Calculated value)		
Partition coefficient n-octanol/water (Log Pow)	4.66 (Experimental value)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.38 (log Koc, SRC PCKOCWIN v2.0, Calculated value)		
Bioaccumulative potential	Potential for bioaccumulation ($4 \ge Log \text{ Kow} \le 5$).		
n-pentane (109-66-0)			
BCF - Fish [1]	171 (Pimephales promelas, QSAR)		
Partition coefficient n-octanol/water (Log Pow)	3.45 (Experimental value, Other, 25 °C)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.9 (log Koc, QSAR)		
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).		

12.4. Mobility in soil

Diesel Injector Cleaner			
Mobility in soil	No additional information available		
hexane (110-54-3)			
Surface tension	0.018 N/m (25 °C, 1 g/l)		
Partition coefficient n-octanol/water (Log Pow)	4 (Experimental value, Equivalent or similar to OECD 107, 20 °C)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.34 (log Koc, QSAR)		
Ecology - soil	Low potential for mobility in soil.		
heptane (142-82-5)			
Surface tension	19.66 mN/m (25 °C)		
Partition coefficient n-octanol/water (Log Pow)	4.66 (Experimental value)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.38 (log Koc, SRC PCKOCWIN v2.0, Calculated value)		
Ecology - soil	Low potential for adsorption in soil.		
n-pentane (109-66-0)			
Surface tension	0.013 N/m (20 °C)		

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

n-pentane (109-66-0)			
Partition coefficient n-octanol/water (Log Pow)	3.45 (Experimental value, Other, 25 °C)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.9 (log Koc, QSAR)		
Ecology - soil	Low potential for adsorption in soil.		
12.5. Other adverse effects			

Ozone Other adverse effects Not classifiedNo additional information available

SECTION 13: Disposal considera	tions
13.1. Disposal methods	
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

IMDG	ΙΑΤΑ
	L
3295	3295
HYDROCARBONS, LIQUID, N.O.S.	Hydrocarbons, liquid, n.o.s.
3	3
	·
Ш	II
	·
Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
	3295 HYDROCARBONS, LIQUID, N.O.S. 3 3 II Dangerous for the environment : Yes

14.6. Special precautions for user

SANS

SANS		
Limited quantities (SANS)	:	1 L
Limited quantities (SANS)	:	1 L
Packagings, large packagings and IBCs Packing	:	P001, IBC02
instructions (SANS)		
Portable tank and bulk containers instructions	:	T7
(SANS)		
Portable tank and bulk container special provisions	:	TP1, TP8, TP28
(SANS)		
IMDG		

Packing instructions (IMDG)

: P001

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

IBC packing instructions (IMDG) Tank instructions (IMDG) Tank special provisions (IMDG) EmS-No. (Fire) EmS-No. (Spillage) Stowage category (IMDG) Properties and observations (IMDG)	 IBC02 T7 TP1, TP8, TP28 F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS B Immiscible with water.
IATA PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) Special provisions (IATA) ERG code (IATA)	: E2 : Y341 : 1L : 353 : 5L : 364 : 60L : A3, A224 : 3H

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 Revision date	: 27/05/2024 : 27/05/2026
Full text of H-	statements
H224	Extremely flammable liquid and vapour
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
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

Full text of H-statements	
H402	Harmful 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
H413	May cause long lasting harmful effects to aquatic life

Safety Data Sheet (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.