

SHIELD TECHNOLOGY LIMITED

SAFETY DATA SHEET

In compliance with Article 31 and Annex II of Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 1272/2008 (CLP) and the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Revision Date: September 2015

Product Name: MetalGuard Ultra

Section 1: Identification of the substance/preparation and of the company/undertaking.

Application: Corrosion preventive fluid

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Section2: Hazards Identification

2.1. Classification of the substance or mixture

Hazard Class	Hazard Category	Hazard Statement
Flammable Liquid	3	H226-Flammable liquid & vapour
Asp. Tox	1	H304-May be fatal if swallowed& enters airways
STOT SE	3	H336-May cause drowsiness or dizziness

Classification (67/548/EEC or 1999/45/EC): Xn. R10. R65. R66,R67

2.2.Label elements.



Signal Word: **DANGER.**

Hazard statements:

H226; Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H336: May cause drowsiness or dizziness.

Precautionary statements:

P101: If medical advice is needed, have product container or label to hand.

P102: Keep out of reach of children.

P210: Keep away from heat sources, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261: Avoid breathing vapours or spray.

P271: Use outdoors or in a well ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310+P331: If Swallowed: Call poison centre/doctor. Do not induce vomiting.

P405: Store locked up

P501: Dispose of contents/container safely and in accordance with local regulations.

Supplemental Label Information:

EUH066: Repeated exposure may cause skin dryness or cracking.

(Hydrocarbons: C9-12, n-alkanes, isoalkanes, cyclics, >2% aromatics)

Section 3: Composition/Information on Ingredients

3.1 Substances

N/A

3.2 Mixture

Hydrocarbons, C9-12, n-alkanes, isoalkanes, cyclics, >2% aromatics	
Registration number (REACH)	01-2119458049-33-XXXX
EU Index number	649-327-00-6
EC Number	919-446-0
CAS	64742-88-7
Content %	80

Section 4: First Aid Measures

4.1. Description of first aid measures

Inhalation	Remove person from source of contamination, Supply person with fresh air and consult a doctor according to symptoms. If the person is unconscious, place in a stable side/recovery position and consult a doctor/medical help. Respiratory arrest-Artificial respiration apparatus necessary.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses. Thoroughly irrigate the eye with clean cool water, seek medical attention.
Ingestion	Do not induce vomiting. Consult doctor/medical assistance immediately-keep SDS available. Danger of aspiration. If vomiting occurs, keep the head low to prevent vomit from entering the lungs.

Inhalation	Vapours in high concentration are anaesthetic. Symptoms from over exposure may include; Headache, fatigue, dizziness, central nervous system depression.
Skin contact	Prolonged contact with skin may cause irritation, redness, cracking & dermatitis.
Eye contact	May cause temporary eye irritation.
Ingestion	Aspiration hazard if swallowed, Entry into lungs following ingestion or vomiting may cause chemical pneumonitis. Nausea, Diarrhea.

Section 5.0 Fire Fighting Measures

5.1 Suitable extinguishing media

Carbon Dioxide, Dry Chemical, Foam or Sand, DO NOT USE WATER

5.2 Special hazards arising from the substance or mixture.

In the case of fire the following can occur;

Oxides of carbon.

Toxic pyrolysis products.

Explosive vapour/air mixture.

Dangerous vapours, heavier than air.

5.3 Advice for firefighters.

In case of fire and/or explosion: do not breathe fumes.

Protective respirator with independent air supply.

Full protection if necessary (fire size dependent).

Cool any containers near to fire with water spray.

Dispose of contaminated extinction water according to official regulations.

Section 6.0 Accidental Release Measures

6.1 Personal precautions, protective equipment & emergency procedures.

Remove possible causes of ignition-do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes and skin.

Avoid spillages, High risk of slipping.

6.2 Environmental precautions.

If leakage occurs; Dam or stem the flow of fluid.

Prevent fluid from entering the drainage system.

Prevent surface and ground –water infiltration, as well as ground penetration.

If accidental entry into the drainage system occurs, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up.

Soak up with a suitable absorbent material (e.g. Universal binding material, sand, diatomaceous earth)

Dispose of in accordance to section 13.

6.4 Reference to other sections.

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

Section 7.0 Handling and Storage

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation

Keep away from sources of ignition- do not smoke.

Take measures against electrostatic discharge, where appropriate.

Avoid contact with eyes and skin.

Do not carry cleaning rags or cloth which are soaked/impregnated with the fluid in pockets or about clothing.

Observe the directions for use and instructions provided.

7.1.2 Notes on general hygiene measures at the workplace.

General hygiene measures for the handling of chemicals are applicable

Wash hands before breaks and at the end of work.

Keep away from food, drink and animal feedstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food and drink are consumed.

7.2 Conditions of safe storage

Keep out of access from unauthorized individuals.

Store products closed and in original containers.

Do not store with flammable or near sources of ignition.

Store in a cool dry place.

STORAGE CLASS: Flammable Liquid Storage.

Section 8.0 Exposure controls/personal protection

8.1 Control Parameters

Occupational exposure limits

Long term exposure limit (8-hour TWA): WEL 150ppm 1000 mg/m³

WEL + Work exposure limit

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, 2 % aromatics						
Area of application	Exposure route/Environmental compartment	Effect on health	description	Value	Unit	Note
Workers/Employees	Human-dermal	Long term, systemic effects	DNEL	300	Mg/kg BW/day	
Workers/employees	Human-inhalation	Long term, systemic effects	DNEL	1500	Mg/M ³	
Consumer	Human-oral	Long term, systemic effects	DNEL	300	Mg/Kg Bw/day	
Consumer	Human-dermal	Long term, systemic effects	DNEL	300	Mg/Kg Bw/day	
Consumer	Human-inhalation	Longterm, systemic effects	DNEL	900	Mg/M ³	

8.2 Exposure controls



8.2.1 Appropriate engineering controls

Use explosion-proof general and local exhaust ventilation.

Eye/face protection:

The following protection should be worn; Chemical splash goggles (EN166)

Hand protection:

The most suitable gloves should be chosen in consultation with the glove supplier/manufacture.

Protective nitrile gloves (EN374), minimum layer .+0.4mm

Permeation time (penetration time) in minutes .+480

Protective hand cream recommended.

Other skin and body protection.

Wear suitable clothing as protection against splashing or contamination. Provide an eye wash and shower where necessary.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking or using the toilet.

Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge:

Gas filter, type A2 P2 (EN14387), colour code brown, white.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to an acceptable level.

Section 9.0 Physical and Chemical Properties

9.1 Appearance	Amber liquid
9.2 Odour	Mild
9.3 Odour threshold	N/A
9.4 pH	Aqueous dispersion : 6-7 units
9.5 Boiling Point/Range	150-220C (solvent)
9.6 Melting Point/Range	N/A
9.7 Evaporation rate	65 (EtEt=1) DIN 53170 (refers to solvent)
9.8 Flash point	>40°C Closed cup)
9.9 Flammability	Flammable
9.10 Autoflammability	Explosive limits – 0.6-3.0% (refers to solvent)
9.11 Oxidising Properties	None
9.12 Vapour Pressure	2.0 kPa at 38C (refers to solvent)
9.13 Relative Density	0.80
9.14 Partition coefficient:	N/A
9.15 Solubility	Insoluble in water. Miscible with most organic compounds
9.16 Viscosity	1.5 mPaS
9.17 Relative Vapour Density	5 (air = 1) (refers to solvent)
9.18 Auto-ignition temperature	>230 °C
9.19 Decomposition temperature	N/A

Information declared as N/A – Not available is not considered justified for enabling proper control measures to be taken.

Section 10.0 Stability and reactivity

10.1 Reactivity.

This product has not been tested/there are no known reactivity hazards associated with this product.

10.2 Chemical stability

Stable with proper storage and handling (store at ambient temperature).

10.3 possibility of hazardous reactions

No dangerous reactions are known

10.4 Conditions to avoid.

Heat, flames and other sources of ignition

10.5 Incompatible materials.

Avoid contact with strong oxidizing agents

10.6 Hazardous decomposition products.

Thermal decomposition may release carbon oxides and other toxic gases or vapours.

Section 11.0 Toxicological information.

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity by oral route						N.D.A
Acute toxicity by dermal route						N.D.A
Acute toxicity by inhalation						N.D.A
Skin corrosion/irritation						N.D.A
Serious eye damage irritation						N.D.A
Respiratory or skin sensitization						N.D.A
Germ cell mutagenicity						N.D.A
Carcinogenicity						N.D.A
Reproductive toxicity						N.D.A
Specific target organ toxicity-single exposure (STOT-SE)						N.D.A
Specific target organ toxicity-repeated exposure (STOT-RE)						N.D.A
Aspiration Hazard						N.D.A
Respiratory tract irritation						N.D.A
Repeated dose toxicity						N.D.A

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2%aromatics						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test Method	Notes
Acute toxicity, by oral route	LD50	>5000	Mg/Kg	Rat	OECD 401 (acute Oral Toxicity)	
Acute toxicity, by dermal route	LD50	>5000	Mg/Kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation	LC50	>5000	Mg/M3/8 hr	Rat	OECD 403 (acute Inhalation Toxicity)	
Skin corrosion/Irritation				Rabbit	OECD 404 (acute Dermal Irritation/Corrosion)	Not irritant repeated exposure may cause skin dryness or cracking
Serious eye damage/irritation				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not Irritant
Respiratory or Skin Sensitisation				Guinea Pig	OECD 406 (Skin Sensitisation)	No (Skin Contact)
Germ Cell Mutagenicity					OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative, Analogous Conclusion
Reproductive Toxicity					OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous Conclusion
Specific target organ toxicity-Single exposure (STOT-SE)						May cause drowsiness or dizziness
Aspiration Hazard						Yes
Repeated dose toxicity					OECD 408 (repeated Dose 90-Day Oral Toxicity Study in Rodents)	Not to be expected
Symptoms						Unconsciousness, headaches, dizziness, reddening of the skin
Paraffin wax, Fume						
Symptoms						Diarrhoea

Section 12.0 Ecological information

Steelgard Fluids (non-aerosol)						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test Method	Notes
Toxicity to fish						N.D.A
Toxicity to daphnia						N.D.A
Toxicity to algae						N.D.A
Persistence and degradability						N.D.A
Bioaccumulative potential						N.D.A
Mobility in soil						N.D.A
Results of PBT and vPvB assessment						N.D.A
Other adverse effects						N.D.A

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, >2% aromatics							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test Method	Notes
Toxicity to fish	LC50	96hr	>1000	Mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to fish	NOELR	28D	0,13	Mg/l	Oncorhynchus mykiss	QSAR	
Toxicity to daphnia	EC50	48hr	>1000	Mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute immobilization test)	
Toxicity to daphnia	NOELR	21d	0,23	Mg/l	Daphnia magna	QSAR	
Toxicity to algae	ErC50	72hr	>1000	Mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae	ebC50	72hr	>1000	Mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae	NOELR	72hr	100	Mg/l	Raphidocelis subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae	NOELR	72hr	100	Mg/l	Raphidocelis subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Growth rate
Toxicity to algae	NOELR	72hr	3	Mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability		28d	80	%		OECD 301F (Ready Biodegradability-Manometric Respirometry Test)	Readily biodegradable
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Section 13.0 Disposal considerations

13.1 Waste treatment methods.

For the substance/mixture/residual amounts.

Soaked polluted cloths, paper or other organic material represents a fire hazard and should be controlled, collected and disposed of.

EC disposal code no

The waste codes are recommendations based on the scheduled use of this product.

Owing to the specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (201/118/EC, 201/119/EC, 2001/573/EC)

13 02 05 Mineral based non-chlorinated engine, gear and lubricating oils.

14 06 03 Other solvents and solvent mixes

Recommendation:

Pay attention to local and national official regulations

For contaminated packing material.

Empty containers may contain residual material/fluid and can be dangerous, do not attempt to refill or clean containers without proper instruction. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed.

DO NOT ATTEMPT TO CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAMES, SPARKS, STATIC ELECTRICITY OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE DEATH OR INJURY.

Waste is classified as hazardous waste and should be disposed of in accordance with Local Wastes Disposal Regulations.

Section 14.0 Transport Information

14.1 UN Number

UN No: (ADR/RID) 1268
UN No: (IMDG) 1268
UN No: (ICAO) 1268

14.2 UN Proper shipping name.

Proper shipping name (ADR/RID) Petroleum Distillates, N.O.S. or Petroleum Products, N.O.S.

Proper shipping name (IMDG) Petroleum Distillates, N.O.S. or Petroleum Products, N.O.S.

Proper shipping name (ICAO) Petroleum Distillates, N.O.S. or Petroleum Products, N.O.S.

Proper shipping name (AND) Petroleum Distillates, N.O.S. or Petroleum Products, N.O.S.

14.3 Transport hazard class(es)

ADR/RID class 3

ADR/RID subsidiary risk

ADR/RID 3

IMDG class 3

IMDG subsidiary risk

ICAO class/division 3

Transport label



14.4 Packing group

ADR/RID packing group III

IMDG packing group III

ICAO packing group III

14.5 Environmental hazards

Environmentally hazardous substance/marine pollutant.
NO.

14.6 Special precautions for users.

EmS F-E, S-E

Emergency code 3Y

Hazards identification number (ADR/RID) 30

Limited Quantity (ADR/RID) 5L

Section 15.0 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

For classification and labeling see section 2

National regulations (UK)

Health and safety at work etc. Act 1974 (as amended).

The control of substances hazardous to health regulations 2002 (SI 2002 No.2677) (as amended).

Control of Substances Hazardous to Health Regulations 2002 (as amended)

EU legislation

Dangerous Substance Directive 67/548/EEC

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures (as amended).

15.2 Chemical safety assessment.

A chemical safety assessment has been carried out.

16.0 Other information

These details refer to the product as it is delivered.

Revision 4

Revised sections N/A

Revision date: Sept. 2015

Supersedes date: Rev. 2 Aug 2013

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Flam. Liq. 3 H226	Classification based on test data
Asp. Tox. 1. H304	Classification according to calculation procedure
STOT SE 3, H336	Classification according to calculation procedure

Risk phrases in full.

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.

Hazard statements in full.

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H336: May cause drowsiness or dizziness.

EUH066: Repeated exposure may cause skin dryness or cracking.

Flam.Liq. – Flammable liquid.

Asp. Tox. _ Aspiration hazard.

STOT SE- Specific target organ toxicity-single exposure-narcotic effect.

These data are presented in good faith and are believed to be accurate. However it is for users themselves as to the suitability of the product for their application.

Sources of information used in the compilation of this document includes manufacturers' Material Safety Data Sheets and Labels, CHIP Approved Supply lists, Codes of Practice and Guidance Notes.

Global Chemical Inventories

USA All components are on the US TCSA inventory or are exempt.

EU All components are in compliance with the EC seventh amendment Directive 92/32/EEC.

Japan All components are in compliance with the Chemical Substances Control Law of Japan.

Australia All components are in compliance with Chemical notification requirements in Australia.

Canada All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

Korea All components are in compliance in Korea.

Philippines All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A.6969).

China All Components of this product are listed on the Inventory of existing Chemical Substances In China

END