SDS no. MI10818
Version 5
Revision date 06/Feb/2015
Supersedes date 13/Sep/2013

Safety Data Sheet
KLA-STOP†

Quantity restrictions apply! Not to be used in quantities of 1 tonne or more within the EEA.

1. Identification of the substance/preparation and of the Company/undertaking

1.1 Product identifier

Product name KLA-STOP†
Product code MI10818

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

Recommended Use Shale inhibitor.

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier
M-I Australia Pty Ltd
Level 5
256 St. George Terrace
Perth
WA 6000
T= 08 9440 2900
MISDS@slb.com

1.4 Emergency Telephone Number

Emergency telephone - (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 561 1600

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to (EC) No. 1272/2008

Health hazards

Skin corrosion/irritation	Category 1 Subcategory 1B
Serious eye damage/eye irritation	Category 1

Environmental hazards Not classified

Physical Hazards Not classified

2.2 Label elements

Signal word
DANGER

Hazard statements
H314 - Causes severe skin burns and eye damage

Precautionary Statements - EU (§28, 1272/2008)
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/ physician
P501 - Dispose of contents/container in accordance with local regulations.

Supplementary precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P363 - Wash contaminated clothing before reuse

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Indication of danger
C - Corrosive

R-code(s)
R34

Contains

Polyether amine

Polyether amine acetate

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16.

2.3 Other data

Not classified as PBT/vPvB by current EU criteria

Australian statement of hazardous/dangerous nature
Classified as Hazardous according to the criteria of NOHSC.
HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

3. Composition/information on ingredients

3.1 Substances

Not Applicable

3.2 Mixtures

Component	EC-No.	CAS-No	Weight % - range	Classification (67/548)	Classification (Reg. 1272/2008)	REACH registration number
Polyether amine	Polymer	9046-10-0	60-100	C;R34	Skin Corr. 1B (H314)	No data available
Polyether amine acetate		0-00-0	10-30	C; R34	Skin Corr. 1B(H314)	No data available

Comments
The product contains other ingredients which do not contribute to the overall classification.

4. First aid measures

4.1 First-Aid Measures

Inhalation Keep at rest. Move the exposed person to fresh air at once. If breathing is difficult, (trained personnel should) give oxygen. Seek medical attention at once.

Ingestion Do NOT induce vomiting. Get immediate medical attention. Rinse mouth. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person.

Skin contact Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns must be treated by a physician.

Eye contact Remove contact lenses. Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General advice Seek medical attention for all burns, regardless how minor they may seem. The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Main symptoms

Inhalation Please see Section 11. Toxicological Information for further information.

Ingestion Please see Section 11. Toxicological Information for further information.

Skin contact Please see Section 11. Toxicological Information for further information.

Eye contact Please see Section 11. Toxicological Information for further information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water Fog, Alcohol Foam, CO_2, Dry Chemical.

Extinguishing media which shall not be used for safety reasons
None known.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards
None known.

Hazardous combustion products
Thermal decomposition can lead to release of toxic and corrosive gases/vapors.

5.3 Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures
Containers close to fire should be removed immediately or cooled with water.

Hazchem code ADG
X2

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep people away from and upwind of spill/leak. Do not get on skin or clothing. Wash thoroughly after handling. Avoid contact with eyes. Do not breathe vapors or spray mist. Use personal protective equipment. See also section 8.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Environmental exposure controls
Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

6.4 Reference to other sections

See section 13 for more information.

7. Handling and storage

7.1 Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Keep away from heat and sources of ignition. Do not get in eyes, on skin or on clothing. Avoid spills and splashing during use. Do not breathe vapors or spray mist.

Hygiene measures
Use good work and personal hygiene practices to avoid exposure. When using do not smoke, eat or drink. Wash hands before eating, drinking or smoking. Remove contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with: Acids

Storage class Corrosive storage.

Packaging material Use specially constructed containers only

7.3 Specific end uses

See Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

Exposure limits Contains no substances with occupational exposure limit values
No biological limit allocated

Component	EU OEL	Austria	Australia	Denmark
Polyether amine	Not determined	Not determined	Not determined	Not determined
Polyether amine acetate	Not determined	Not determined	Not determined	Not determined

Component	Finland	France	Germany	Hungary
Polyether amine	Not determined	Not determined	Not determined	Not determined
Polyether amine acetate	Not determined	Not determined	Not determined	Not determined

Component	New Zealand	Italy	Netherlands	Norway
Polyether amine	Not Determined	Not determined	Not determined	Not determined
Polyether amine acetate	Not Determined	Not determined	Not determined	Not determined

Component	Poland	Portugal	Romania	Russia
Polyether amine	Not determined	Not determined	Not determined	Not determined
Polyether amine acetate	Not determined	Not determined	Not determined	Not determined

Component	Spain	Switzerland	Turkey	UK
Polyether amine	Not determined	Not determined	Not determined	Not determined
Polyether amine acetate	Not determined	Not determined	Not determined	Not determined

8.2 Exposure controls

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures to reduce exposure
Ensure adequate ventilation. Mechanical ventilation or local exhaust ventilation is required.

Personal protective equipment

Eye protection	It is good practice to wear goggles when handling any chemical. Tightly fitting safety goggles. Face-shield.
Hand protection	Impervious gloves made of:, Nitrile, Neoprene, Rubber, Be aware that liquid may penetrate the gloves. Frequent change is advisable.
Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment, Chemical respirator with ammonia and amines cartridge (K/P2, green filter), At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.
Skin and body protection	Wear suitable protective clothing, Eye wash and emergency shower must be available at the work place.

Hygiene measures Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Odor	Ammoniacal
Color	Colorless
Odor threshold	Not applicable

Property	Values	Remarks
pH	No information available	
pH @ dilution	11.7	@ 5%
Melting/freezing point	-22 - -20 °C / -7.6 - -4 °F	
Boiling point/range	232 °C / 449.6 °F	
Flash point	128 °C / 262.4 °F	Closed cup
Evaporation rate (BuAc =1)		
Flammability (solid, gas)	Not Applicable	

Flammability Limits in Air		
Upper flammability limit	Not applicable	
Lower flammability limit	Not applicable	
Vapor pressure	> 1 mmHg	@ 100 °C
Vapor density	No information available	
Specific gravity	No information available	
Bulk density	No information available	
Relative density	1.03 - 1.04 sg	@ 20-25°C.
Water solubility	Miscible with water.	
Solubility in other solvents	No information available	
Autoignition temperature	230 °C / 446 °F	
Decomposition temperature	No information available	
Kinematic viscosity	5.46 cSt	
Dynamic viscosity	No information available	
Log Pow	-0.38 (Log Kow)	

Explosive properties	No information available
Oxidizing properties	No information available

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	25%
Density	No information available

10. Stability and reactivity

10.1 Reactivity

Corrosive.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization
Not known.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5 Incompatible materials

Acids.

10.6 Hazardous decomposition products

See also section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation Vapors may irritate throat and respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Eye contact Causes burns. May cause irreversible damage to eyes.

Skin contact Causes severe skin burns.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polyether amine	= 242 mg/kg (Rat)	= 360 mg/kg (Rabbit)	No data available
Polyether amine acetate	No data available	No data available	No data available

Sensitization This product does not contain any components suspected to be sensitizing.

Mutagenic effects This product does not contain any known or suspected mutagens.

Carcinogenicity This product does not contain any known or suspected carcinogens.

Reproductive toxicity This product does not contain any known or suspected reproductive hazards.

Routes of exposure Skin contact. Eye contact. Inhalation.

Routes of entry Skin contact. Eye contact. Inhalation.

Specific target organ toxicity (single exposure) Not classified

Specific target organ toxicity (repeated exposure) Not classified.

Aspiration hazard No hazard from product as supplied.

12. Ecological information

12.1 Toxicity

The product component(s) are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Toxicity to algae
This product is not considered toxic to algae.

Toxicity to fish
This product is not considered toxic to fish.

Toxicity to daphnia and other aquatic invertebrates
This product is not considered toxic to invertebrates.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Polyether amine	No information available	No information available	No information available
Polyether amine acetate	No information available	No information available	No information available

12.2 Persistence and degradability

Product is not biodegradable.

12.3 Bioaccumulative potential

Does not bioaccumulate.

Log Pow
-0.38 (Log Kow)

12.4 Mobility in soil

Mobility
The product is miscible with water. May spread in water systems.

12.5 Results of PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects.

None known.

13. Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products — Dispose of in accordance with local regulations.

Contaminated packaging — Empty containers should be taken for local recycling, recovery or waste disposal.

EWC Waste disposal No. — According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: EWC waste disposal No: 07 01 04 Waste Code: 7152 Organic waste without halogen.

14. Transport information

14.1 UN Number

UN/ID No. (ADR/RID/ADN/ADG)	UN2735
UN No. (IMDG)	UN2735
UN No. (ICAO)	UN2735

14.2 Proper shipping name
AMINES, LIQUID, CORROSIVE, N.O.S. (Contains Poly ether amine)

14.3 Hazard class(es)

ADR/RID/ADN Hazard class	8
IMDG Hazard class	8
ICAO Hazard class/division	8

14.4 Packing group

ADR/RID/ADN Packing Group	III
IMDG Packing group	III
ICAO Packing group	III

14.5 Environmental hazard
No

14.6 Special precautions

Hazard identification no (ADR)	80
EmS (IMDG)	F-A, S-B
Emergency action code	2X
Tunnel restriction code	(E)
Hazchem code ADG	X2

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Please contact MISDS@slb.com for info regarding transport in Bulk.

15. Regulatory information

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

Germany, Water Endangering Classes (VwVwS)	Water endangering class = 1

Australian Standard for the Uniform Scheduling of Drugs and Poisons
No Poisons Schedule number allocated

New Zealand hazard classification	Corrosive

HSNO approval no. HSR002491

Group number 8.3A, 8.2C

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). 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), establishing a European Chemicals Agency, amending Directive 1999/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)].

National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004) 3rd Edition].

National Occupational Health and Safety Commission's Exposure Standards for Atmospheric Contaminants in the occupational Environment [NOHSC:1003 (1995)].

Safe Work Australia.

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

ADG Code – Australian Dangerous Goods Code.

Dutch Mining Regulations: In accordance with Mining Regulations 9.2 and Chapter 4 of the Working Conditions Decree.

International inventories

USA (TSCA)	Complies
European Union (EINECS and ELINCS)	Complies
Canada (DSL)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

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15.2 Chemical Safety Report

No information available

16. Other information

Prepared by	Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Anne Karin (Anka) Fosse
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Version	5
The following sections have been revised	Updated according to GHS/CLP, This SDS have been made in a new database and therefore a new layout. No changes with regard to classification have been made.

Text of R phrases mentioned in Section 2 and 3
R34 - Causes burns

Full text of H-Statements referred to under sections 2 and 3

H314 - Causes severe skin burns and eye damage

†A mark of M-I L.L.C.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.