HALLIBURTON

SAFETY DATA SHEET

BaraVis® IE-570

Revision Date: 18-Feb-2015 **Revision Number:** 14

1. Product Identifier & Identity for the Chemical

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

1.1. Product Identifier

Product Name BaraVis® IE-570

Other means of Identification

Synonyms: None

Product Code: HM007959

Recommended use of the chemical and restrictions on use

Recommended Use Viscosifier

Uses Advised Against No information available

Supplier's name, address and phone number

Manufacturer/Supplier

Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: + 61 1 800 686 951
Fax Number: 61 (08) 9455 5300

E-Mail address: fdunexchem@halliburton.com

Emergency phone number

+ 61 1 800 686 951

Australian Poisons Information Centre

24 Hour Service: - 13 11 26

Police or Fire Brigade: - 000 (exchange): - 1100

2. Hazard Identification

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

Classification of the hazardous chemical

Skin Corrosion / irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 1 - H318
Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 1 - H410

Label elements, including precautionary statements

Hazard Pictograms

Signal Word Danger

Hazard Statements
H315 - Causes skin irritation
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/eye protection/face protection

Response
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
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
P391 - Collect spillage

Storage None

Disposal P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances	**CAS Number**
Amines, C36-alkylenedi-	68955-56-6

Other hazards which do not result in classification
This substance is considered to be persistent, bioaccumulating and toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Australia Classification
For the full text of the H-phrases mentioned in this Section, see Section 16

Classification
Xi - Irritant.
N - Dangerous for the environment

Risk Phrases
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Amines, C36-alkylenedi-	68955-56-6	60 - 100%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318)

			Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

4. First aid measures

Description of necessary first aid measures

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Skin Wash with soap and water. Get medical attention if irritation persists.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Symptoms caused by exposure

Causes severe eye irritation which may damage tissue. Causes skin irritation.

Medical Attention and Special Treatment

Notes to Physician Treat symptomatically

5. Fire Fighting Measures

Suitable extinguishing equipment

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Specific hazards arising from the chemical

Special Exposure Hazards

Decomposition in fire may produce harmful gases.

Special protective equipment and precautions for fire fighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove. Neutralize the residue with a dilute solution of acetic acid.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist. Wash hands after use.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store in a cool, dry location. Product has a shelf life of 24 months.

Other Guidelines

No information available

8. Exposure Controls/Personal Protection

Control parameters - exposure standards, biological monitoring

Exposure Limits

Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA
Amines, C36-alkylenedi-	68955-56-6	Not applicable	Not applicable

Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

Personal protective equipment (PPE)

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.
Not normally needed. But if significant exposures are possible then the following respirator is recommended:
Organic vapor respirator.

Hand Protection Chemical-resistant protective gloves (EN 374) Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Neoprene gloves. (>= 0.75 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

Skin Protection Normal work coveralls.

Eye Protection Wear safety glasses or goggles to protect against exposure.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls No information available

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid
Color: Clear yellow to amber
Odor: Ammonia
Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	11
Freezing Point/Range	-34 °C
Melting Point/Range	No data available
Boiling Point/Range	> 350 °C
Flash Point	> 200 °C / PMCC
Flammability (solid, gas) Not applicable	
upper flammability limit	-
lower flammability limit	-
Evaporation rate	No data available

Vapor Pressure	< 0.0000002 hPa
Vapor Density	No data available
Specific Gravity	0.9
Water Solubility	Negligible
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	14.11
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%) No data available

10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

None anticipated

10.5. Incompatible Materials

Strong oxidizers. Strong acids.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide. Oxides of nitrogen.

11. Toxicological Information

Information on routes of exposure

Principle Route of Exposure Eye and skin contact.

Symptoms related to exposure

Most Important Symptoms/Effects

Causes severe eye irritation which may damage tissue. Causes skin irritation.

Numerical measures of toxicity

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Amines, C36-alkylenedi-	68955-56-6	> 5000 mg/kg (Rat)	No data available	No data available

Immediate, delayed and chronic health effects from exposure

Inhalation	Heated vapors may cause respiratory irritation.
Eye Contact	Causes severe eye irritation which may damage tissue.
Skin Contact	Causes skin irritation.
Ingestion	None known.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

Exposure Levels

No data available

Interactive effects

None known.

Data limitations

No data available

Substances	CAS Number	Skin corrosion/irritation
Amines, C36-alkylenedi-	68955-56-6	Skin, rabbit: Causes skin irritation.

Substances	CAS Number	Eye damage/irritation
Amines, C36-alkylenedi-	68955-56-6	Eye, rabbit: Causes severe eye irritation which may damage tissue.

Substances	CAS Number	Skin Sensitization
Amines, C36-alkylenedi-	68955-56-6	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Amines, C36-alkylenedi-	68955-56-6	No information available

Substances	CAS Number	Mutagenic Effects
Amines, C36-alkylenedi-	68955-56-6	In vitro tests did not show mutagenic effects

Substances	CAS Number	Carcinogenic Effects
Amines, C36-alkylenedi-	68955-56-6	No information available.

Substances	CAS Number	Reproductive toxicity
Amines, C36-alkylenedi-	68955-56-6	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Amines, C36-alkylenedi-	68955-56-6	No information available

Substances	CAS Number	STOT - repeated exposure
Amines, C36-alkylenedi-	68955-56-6	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Amines, C36-alkylenedi-	68955-56-6	Not applicable

12. Ecological Information

Ecotoxicity

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Amines, C36-alkylenedi-	68955-56-6	ErC50 (72h) 0.0443 mg/L (Pseudokirchneriella subcapitata) (Non-toxic at limit of solubiltity) EC50 (72h) 14.5 - 22 mg/L (Skeletonema costatum) (Non-toxic at limit of solubiltity) EC50 (72h) 0.0157 mg/L (Pseudokirchneriella subcapitata)	LC50 (96h) (Non-toxic at limit of solubiltity) (Dania rerio) LC50 (96h) > 1000 mg/L (Cyprinodon variegatus) LC50 (96h) >100 mg/L (Danio rerio)	NOEC (3h) 1000 mg/L (Activated sludge)	EC10 (21d) 4.39 mg/L (Daphnia magna) (Non-toxic at limit of solubiltity) EC50 (48h) > 3000 mg/L (Acartia tonsa) > LC50 (10d) 12469.47 mg/kg (Corophium volutator) EC50 (48h) 139.95 mg/L (Daphnia magna)

12.2. Persistence and degradability

Not readily biodegradable

Substances	CAS Number	Persistence and Degradability
Amines, C36-alkylenedi-	68955-56-6	(40% @ 28d)

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Substances	CAS Number	Log Pow

Amines, C36-alkylenedi-	68955-56-6	Log Kow = 14.11

12.4. Mobility in soil

Substances	CAS Number	Mobility
Amines, C36-alkylenedi-	68955-56-6	No information available

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

Safe handling and disposal methods

Disposal should be made in accordance with federal, state, and local regulations.

Disposal of any contaminated packaging

Follow all applicable national or local regulations.

Environmental regulations

Not applicable

14. Transport Information

Transportation Information

UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Alkyldiamine)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

Special precautions during transport

None

HazChem Code

None Allocated

15. Regulatory Information

Safety, health and environmental regulations specific for the product

International Inventories

Australian AICS Inventory All components listed on inventory or are exempt.
New Zealand Inventory of Chemicals All components listed on inventory or are exempt.
EINECS Inventory This product, and all its components, complies with EINECS
US TSCA Inventory All components listed on inventory or are exempt.
Canadian DSL Inventory Product contains one or more components not listed on the inventory.

Poisons Schedule number

None Allocated

16. Other information

Date of preparation or review

Revision Date: 18-Feb-2015

Revision Note
SDS sections updated: 2

Full text of R-phrases referred to under Sections 2 and 3
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3
H315 - Causes skin irritation
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key abreviations or acronyms used
bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NOEC – No Observed Effect Concentration
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
vPvB – very Persistent and very Bioaccumulative
h - hour
mg/m^3 - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data
www.ChemADVISOR.com/

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End of Safety Data Sheet