

## SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

### BaraVis® IE-570

Revision Date: 18-Feb-2015

Revision Number: 14

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1. Product Identifier**

Product Name BaraVis® IE-570  
Internal ID Code HM007959

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

**Recommended Use** Viscosifier  
**Sector of use** SU2 - Mining, (including offshore industries)  
**Product category** PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents, other unspecific  
**Process categories** PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises

**1.3. Details of the supplier of the safety data sheet**

Halliburton Manufacturing Services, Ltd.  
Halliburton House, Howemoss Crescent  
Kirkhill Industrial Estate  
Dyce  
Aberdeen, AB21 0GN  
United Kingdom

[www.halliburton.com](http://www.halliburton.com)

For further information, please contact

**E-Mail address:** [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)

**1.4. Emergency telephone number**

+44 8 08 189 0979 / 1-760-476-3961

Emergency telephone - §45 - (EC)1272/2008	
Europe	112
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	+210 7793777
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO):+ 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

#### SECTION 2: Hazards Identification

**2.1. Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Skin Corrosion / irritation	Category 2 - (H315)
Serious Eye Damage / Eye Irritation	Category 1 - (H318)

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

**2.2. Label Elements**

**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 - EU (§28, 1272/2008)**

- P273 - Avoid release to the environment
- P280 - Wear protective gloves/eye protection/face protection
- 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
- P501 - Dispose of contents/container to an approved waste disposal plant

**Contains**

**Substances**

Amines, C36-alkylenedi-

**CAS Number**

68955-56-6

**2.3. Other Hazards**

This substance is considered to be persistent, bioaccumulating and toxic (PBT).  
 This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

**SECTION 3: Composition/information on Ingredients**

**3.1. Substances**

Substance

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Amines, C36-alkylenedi-	273-282-8	68955-56-6	60 - 100%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available

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

**SECTION 4: First aid measures**

**4.1. Description of 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.

**4.2. Most Important symptoms and effects, both acute and delayed**  
 Causes severe eye irritation which may damage tissue. Causes skin irritation.

**4.3. Indication of any immediate medical attention and special treatment needed**  
**Notes to Physician** Treat symptomatically

**SECTION 5: Firefighting Measures**

**5.1. Extinguishing media**  
**Suitable Extinguishing Media**  
 Water fog, carbon dioxide, foam, dry chemical.  
**Extinguishing media which must not be used for safety reasons**  
 None known.

**5.2. Special hazards arising from the substance or mixture**  
**Special Exposure Hazards**  
 Decomposition in fire may produce harmful gases.

**5.3. Advice for firefighters**  
**Special Protective Equipment for Fire-Fighters**  
 Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**  
 Use appropriate protective equipment.  
 See Section 8 for additional information

**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.

**6.4. Reference to other sections**  
 See Section 8 and 13 for additional information.

**SECTION 7: Handling and Storage**

**7.1. Precautions for Safe Handling**  
 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**  
 Store in a cool, dry location. Product has a shelf life of 24 months.

**7.3. Specific End Use(s)**  
**Exposure Scenario** No information available  
**Other Guidelines** No information available

**SECTION 8: Exposure Controls/Personal Protection**

**8.1. Control parameters**

**Exposure Limits**

Substances	CAS Number	EU	UK	Netherlands	France
Amines, C36-alkylenedi-	68955-56-6	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Amines, C36-alkylenedi-	68955-56-6	Not applicable	Not applicable	Not applicable	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Amines, C36-alkylenedi-	68955-56-6	Not applicable	Not applicable	Not applicable	Not applicable

  

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Amines, C36-alkylenedi-	68955-56-6	Not applicable	Not applicable	Not applicable	Not applicable

  

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Amines, C36-alkylenedi-	68955-56-6	Not applicable	Not applicable	Not applicable	Not applicable

**Derived No Effect Level (DNEL)** No information available.  
**Worker**

**General Population**

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Engineering Controls** Use in a well ventilated area.

**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

**SECTION 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

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

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

**9.2. Other information**

**VOC Content (%)** No data available

**SECTION 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.

**SECTION 11: Toxicological Information**

**11.1. Information on Toxicological Effects**

**Acute Toxicity**

**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.

**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

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

## SECTION 12: Ecological Information

### 12.1. Toxicity Ecotoxicity Effects

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 solubility) EC50 (72h) 14.5 - 22 mg/L (Skeletonema costatum) (Non-toxic at limit of solubility) EC50 (72h) 0.0157 mg/L (Pseudokirchneriella subcapitata)	LC50 (96h) (Non-toxic at limit of solubility) (Danio 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 solubility) 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

### 12.5. Results of PBT and vPvB assessment

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Substances	PBT and vPvB assessment
Amines, C36-alkylenedi-	PBT substance

### 12.6. Other adverse effects

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## SECTION 13: Disposal Considerations

**13.1. Waste treatment methods**

**Disposal Method** Disposal should be made in accordance with federal, state, and local regulations.  
**Contaminated Packaging** Follow all applicable national or local regulations.

**SECTION 14: Transport Information**

**IMDG/IMO**

**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

**RID**

**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

**ADR**

**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

**IATA/ICAO**

**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

- 14.1. UN Number:** UN3082
- 14.2. UN Proper Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Alkyldiamine)
- 14.3. Transport Hazard Class(es):** 9
- 14.4. Packing Group:** III
- 14.5. Environmental Hazards:** Marine Pollutant
- 14.6. Special Precautions for User:** None
- 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 regulations/legislation specific for the substance or mixture**  
 Hazardous to water/Class 2

**International Inventories**

**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.

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering Classes (WGK)** WGK 1: Low hazard to waters.

**15.2. Chemical Safety Assessment**

No information available

**SECTION 16: Other Information****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

**Key or legend to abbreviations and acronyms**

bw – body weight

CAS – Chemical Abstracts Service

CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures

EC – European Commission

EC10 – Effective Concentration 10%

EC50 – Effective Concentration 50%

EEC – European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL0 – Lethal Loading 0%

LL50 – Lethal Loading 50%

MARPOL – International Convention for the Prevention of Pollution from Ships

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NOEC – No Observed Effect Concentration

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PBT – Persistent Bioaccumulative and Toxic

PC – Chemical Product category

PEL – Permissible Exposure Limit

ppm – parts per million

PROC – Process category

REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL – Short Term Exposure Limit

SU – Sector of Use category

**Key literature references and sources for data**[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)**Revision Date:** 18-Feb-2015**Revision Note**

Not applicable SDS sections updated: 2

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010****Disclaimer Statement**

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**End of Safety Data Sheet**