SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

ARMOHIB CI-5150

Version 1 Revision Date 13.11.2017 Print Date 11.03.2020 DE / EN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name : ARMOHIB CI-5150

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

Use of the Substance/Mixture : Specific use(s): Surfactant

1.3 Details of the supplier of the safety data sheet

Company : Nouryon Surface Chemistry AB
Stenunge Alle 3
SE 444 85 Stenungsund
Sweden

Telephone : +4630385000
Telefax : +4630384659
E-mail address : Regulatory.Affairs@nouryon.com

1.4 Emergency telephone number

Emergency telephone number : 020 99 60 00 Kemiakuten, SE +31 57 06 79 211 24 hours emergency response number

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Acute toxicity, 4, H302
Serious eye damage, 1, H318

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Pictogram :

Signal word : Danger

Hazard statements :

H302	Harmful if swallowed.
H318	Causes serious eye damage.

Precautionary statements :

Prevention:	
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear eye protection/ face protection.
Response:	
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Disposal:	
P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised	1421663-75-3

2.3 Other hazards

No further data available.

PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Pure substance/mixture : Mixture

Hazardous substance

Chemical name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised		1421663-75-3	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 50 - < 60
2-(2-Butoxyethoxy)ethanol		112-34-5 203-961-6	Eye Irrit. 2; H319	>= 40 - < 50

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
Status : Not applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice : Immediate medical attention is required.
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

If inhaled : If breathed in, move person into fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Rinse immediately with plenty of water.

In case of eye contact : Rinse with plenty of water.
Get medical attention immediately. Continue to rinse during transport.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

Risks	:	Harmful if swallowed. Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	:	Alcohol-resistant foam Dry chemical

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting / Specific hazards arising from the chemical	:	Water spray may be ineffective unless used by experienced firefighters.
Combustion products	:	Carbon oxides Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation.
Emergency measures on accidental release	:	Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene. Prevent unauthorised persons entering the zone.

6.2 Environmental precautions

Environmental precautions	:	Try to prevent the material from entering drains or water courses. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / Methods for containment	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Avoid formation of aerosol.
Keep away from sources of ignition - No smoking.
No sparking tools should be used.
Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking.
Keep in a well-ventilated place.

German storage class : Combustible liquids

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
2-(2-Butoxyethoxy)ethanol	112-34-5	TWA	10 ppm 67,5 mg/m3	2006-02-09	2006/15/EC	
	Further information	:	Indicative			
		STEL	15 ppm 101,2 mg/m3	2006-02-09	2006/15/EC	
	Further information	:	Indicative			
		AGW	10 ppm 67 mg/m3	2012-01-12	DE TRGS 900	Vapour and aerosols
	Further information	:	DFG: Senate commission for the review of compounds at the w ork place dangerous for the health (MAK-commission). EU: European Union (The EU has established a limit value: deviations in value and peak limit are possible) 11: Sum of vapor and aerosols. Y: When there is compliance w ith the OEL and biological tolerance values, there is no risk of harming the unborn child			

ACGIH:	American Conference of Governmental Industrial Hygienists
AGW:	Arbeitsplatzgrenzwert
BEI:	Biological Exposure Index
MAC:	Maximum Allowable Concentration
NIOSH:	National Institute for Occupational Safety and Health
OEL:	OEL: Occupational exposure limit.
STEL:	Short term exposure limit
TRGS:	Technische Regel für Gefahrstoffe
TWA:	Time Weighted Average

8.2 Exposure controls

Engineering controls
Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection	:	In the case of vapour or aerosol formation use a respirator with an approved filter.
Hand protection	:	Neoprene Nitrile rubber
Eye protection	:	Tightly fitting safety goggles
Skin and body protection	:	Protective suit
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice	:	Try to prevent the material from entering drains or water courses. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form	:	liquid
Colour	:	brown
Odour	:	ester-like
Odour Threshold	:	No data available

Safety data

pH	:	3,6 1% (water)
Pour point	:	-5 °C
Boiling point/boiling range	:	> 100 °C
Flash point	:	92 °C Method: ASTM D93 A
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Combustible liquid.
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1 044 kg/m3
Relative density	:	1,04
Water solubility	:	soluble
Solubility in other solvents	:	Methanol soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	None known.

10.6 Hazardous decomposition products

Hazardous decomposition products	:	No hazardous decomposition products are known.
Thermal decomposition	:	No data available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product information:

Acute toxicity	:	Harmful if swallowed.
Skin corrosion/irritation	:	Not classified based on available information.
Serious eye damage/eye irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	Respiratory sensitisation: Not classified based on available information. Skin sensitisation: Not classified based on available information.
Germ cell mutagenicity	:	Not classified based on available information.
Carcinogenicity	:	Not classified based on available information.
Reproductive toxicity	:	Not classified based on available information.
STOT - single exposure	:	Not classified based on available information.
STOT - repeated exposure	:	Not classified based on available information.
Aspiration hazard	:	Not classified based on available information.
Further information	:	No further data available.

Test result

Acute oral toxicity : Acute toxicity estimate: 909,09 mg/kg
Method: Calculation method

Toxicology data for the components:
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised

Acute toxicity:
Acute oral toxicity : LD50: > 300 - 2 000 mg/kg
Species: Rat
Method: OECD Test Guideline 423

Skin corrosion/irritation : Result: No skin irritation
Method: OECD Test Guideline 439

Serious eye damage/eye irritation : Result: Risk of serious damage to eyes.
Method: OECD Test Guideline 405

Respiratory or skin sensitisation : Result: Does not cause skin sensitisation.

2-(2-Butoxyethoxy)ethanol

Acute toxicity:
Serious eye damage/eye irritation : Result: Irritating to eyes.

SECTION 12: ECOLOGICAL INFORMATION

Product information:
Ecotoxicology Assessment
Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

12.1 Toxicity

Components:
Test result
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised
Toxicity to fish : LC50: > 1 - 10 mg/l
Exposure time: 96 h
Species: Cyprinodon variegatus (sheepshead minnow)
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50: > 10 - 100 mg/l
Exposure time: 48 h
Species: Acartia tonsa

Toxicity to algae : EC50: > 1 - 10 mg/l
Exposure time: 72 h
Species: Skeletonema costatum (marine diatom)

2-(2-Butoxyethoxy)ethanol
Toxicity to daphnia and other aquatic invertebrates : EC50: > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202

12.2 Persistence and degradability

Product information : No information available.

Components:
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised
Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 306

2-(2-Butoxyethoxy)ethanol
Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Product information : No information available.

Components:
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised
Bioaccumulation : Bioaccumulation is unlikely.

2-(2-Butoxyethoxy)ethanol

Bioaccumulation : Bioaccumulation is unlikely.

12.4 Mobility in soil

Product information : No information available.

Components:
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised
Mobility : No data available

2-(2-Butoxyethoxy)ethanol
Mobility : No data available

12.5 Results of PBT and vPvB assessment

Product information:
PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised
PBT and vPvB assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic)

This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

2-(2-Butoxyethoxy)ethanol
PBT and vPvB assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic)
This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

12.6 Other adverse effects

Product information : No information available.

Components:
N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised

Biochemical Oxygen Demand (BOD) : No data available

2-(2-Butoxyethoxy)ethanol

Biochemical Oxygen Demand (BOD) : No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Hazardous waste
Dispose of contents/container in accordance with local regulation.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

Not regulated as a dangerous good

14.2 Proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: REGULATORY INFORMATION

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Water contaminating class (Germany)	:	WGK 1 slightly water endangering Classification according to AwSV, Annex 1 (5.2)
TA Luft List (Germany)	:	• Total dust: Not applicable • Inorganic substances in powdered form: Not applicable • Inorganic substances in vapour or gaseous form: Not applicable • Organic Substances: Not applicable • Carcinogenic substances: Not applicable • Mutagenic: Not applicable • Toxic to reproduction: Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

EU. REACH - Annex XVII	:	Banned and/or restricted: • 2-(2-Butoxyethoxy)ethanol

Notification status

DSL	:	q (quantity restricted). This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL. N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised
AICS	:	NO. Not in compliance with the inventory
NZIoC	:	NO. Not in compliance with the inventory
ENCS	:	NO. Not in compliance with the inventory
ISHL	:	NO. Not in compliance with the inventory
KECI	:	NO. Not in compliance with the inventory
PICCS	:	NO. Not in compliance with the inventory
IECSC	:	NO. Not in compliance with the inventory
TCSI	:	NO. Not in compliance with the inventory
TSCA	:	YES. All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.

For explanation of abbreviation see section 16.

15.2 Chemical safety assessment

N-methyl dialkanol amine and oleic fatty acid diacid copolymer, methyl quaternised	:	No information available.
2-(2-Butoxyethoxy)ethanol	:	No information available.

SECTION 16: OTHER INFORMATION

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

H302	:	Harmful if swallowed.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.

Classification procedure:
Acute toxicity, 4, H302, Calculation method
Serious eye damage, 1, H318, Calculation method

Full text of other abbreviations

2006/15/EC	:	Europe. Indicative occupational exposure limit values
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
2006/15/EC / TWA	:	Limit Value - eight hours
2006/15/EC / STEL	:	Short term exposure limit
DE TRGS 900 / AGW	:	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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.