

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

BARACOR® 95

Revision Date: 15-Sep-2015

Revision Number: 41

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

1.1. Product Identifier

Product Name BARACOR® 95
Internal ID Code HM003499
Contains Monoethanolamine

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

Recommended Use pH Control
Sector of use Refer to the Annex for a listing of uses.

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

For further information, please contact

E-Mail address: 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

Acute Oral Toxicity	Category 4 - (H302)
Acute Toxicity - Dermal	Category 4 - (H312)
Acute Inhalation Toxicity - Vapors	Category 4 - (H332)
Skin Corrosion / irritation	Category 1 B - (H314)
Serious Eye Damage / Eye Irritation	Category 1 - (H318)

Specific Target Organ Toxicity - (Single Exposure)	Category 3 - (H335)
Chronic Aquatic Toxicity	Chronic 3 - (H412)

2.2. Label Elements

Hazard Pictograms



Signal Word

Danger

Hazard Statements

H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
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

Contains

Substances

Monoethanolamine

CAS Number

141-43-5

2.3. Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on Ingredients

3.2. Mixtures

Mixture

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Monoethanolamine	205-483-3	141-43-5	60 - 100%	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	01-2119486455-28

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, move victim to fresh air and seek medical attention.

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	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.
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 severe skin irritation with tissue destruction. Harmful if swallowed. Harmful in contact with skin. Toxic if inhaled. May cause respiratory 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**

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases. Do not allow runoff to enter waterways.

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. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. Evacuate all persons from the area.
See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas. Consult local authorities.

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.

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. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store away from acids. Store away from oxidizers. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 36 months.

7.3. Specific End Use(s)**Exposure Scenario**

Please refer to the attached Annex for a listing of exposure scenarios.

Other Guidelines

No information available

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters**Exposure Limits**

Substances	CAS Number	EU	UK	Netherlands	France
Monoethanolamine	141-43-5	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	TWA: 2.5 mg/m ³ STEL: 7.6 mg/m ³	1 ppm

Substances	CAS Number	Germany	Spain	Portugal	Finland
Monoethanolamine	141-43-5	TWA: 2 ppm TWA: 5.1 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ 3 ppm STEL [VLA-EC]; 7.5 mg/m ³ STEL [VLA-EC]	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Monoethanolamine	141-43-5	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	1 ppm TWA; 2.5 mg/m ³ TWA 3 ppm STEL; 7.6 mg/m ³ STEL	TWA: 2 ppm TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 5 mg/m ³

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Monoethanolamine	141-43-5	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	TWA: 2.5 mg/m ³ STEL: 7.5 mg/m ³	TWA: 2.5 mg/m ³ STEL: 7.6 mg/m ³	TWA: 2.5 mg/m ³

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Monoethanolamine	141-43-5	TWA: 1 ppm TWA: 2.5 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³	TWA: 1 ppm TWA: 2.5 mg/m ³ STEL: 3 ppm STEL: 7.6 mg/m ³

Derived No Effect Level (DNEL)**Worker**

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Hazards for the eyes - local effects
Monoethanolamine	Not available	Not available	3.3 mg/m ³	Not available	1 mg/kg bw/day	Not available	Not available	Not available	Not available

General Population

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Long-term exposure - systemic effects, Oral	Acute / short term exposure - local effects, Oral	Hazards for the eyes - local effects
Monoethanolamine	Not available	Not available	2 mg/m ³	Not available	0.24 mg/kg bw/day	Not available	Not available	Not available	3.75 mg/kg bw/day	Not available	Not available

Predicted No Effect Concentration (PNEC)

Substances	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Sediment (freshwater)	Sediment (marine water)	Air	Soil	Secondary poisoning
Monoethanolamine	0.085 mg/L	0.18 mg/L	Not available	100 mg/L	0.425 mg/kg dw	0.145 mg/kg dw	Not available	0.035 mg/kg dw	Not available

8.2. Exposure controls**Engineering Controls**

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

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. In high concentrations, supplied air respirator or a self-contained breathing apparatus. (EN137:2006, 2)
Hand Protection	Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.35 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	Rubber apron. Rubber boots
Eye Protection	Chemical goggles; also wear a face shield if splashing hazard exists.
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:	Colorless
Odor:	Amine	Odor Threshold:	No information available

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	12
Freezing Point/Range	-13 °C
Melting Point/Range	No data available
Boiling Point/Range	130 °C / 266 °F
Flash Point	96 °C / 205 °F PMCC
Flammability (solid, gas)	No data available
upper flammability limit	No data available
lower flammability limit	No data available
Evaporation rate	0.1
Vapor Pressure	0.2 mmHg @ 20°C
Vapor Density	2.1 (air = 1)
Specific Gravity	1.02
Water Solubility	Miscible with water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	-1.9
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
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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 acids. Strong oxidizers.

10.6. Hazardous Decomposition Products

Ammonia. Carbon monoxide and carbon dioxide. Hydrocarbons.

SECTION 11: Toxicological Information**11.1. Information on Toxicological Effects****Acute Toxicity****Inhalation**

Harmful if inhaled. Causes severe respiratory irritation.

Eye Contact

Causes eye burns.

Skin Contact

Causes burns. Harmful if absorbed through the skin.

Ingestion

Causes burns of the mouth, throat and stomach. Harmful if swallowed.

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
Monoethanolamine	141-43-5	1089 mg/kg (Rat)	2504 mg/kg (Rabbit)	> 2.4 mg/L (Rat) 4h

Substances	CAS Number	Skin corrosion/irritation
Monoethanolamine	141-43-5	Skin, rabbit: Corrosive to skin

Substances	CAS Number	Eye damage/irritation
Monoethanolamine	141-43-5	Eye, rabbit: Corrosive to eyes

Substances	CAS Number	Skin Sensitization
Monoethanolamine	141-43-5	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Monoethanolamine	141-43-5	No information available

Substances	CAS Number	Mutagenic Effects
Monoethanolamine	141-43-5	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects

Substances	CAS Number	Carcinogenic Effects
Monoethanolamine	141-43-5	No information available.

Substances	CAS Number	Reproductive toxicity
Monoethanolamine	141-43-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Monoethanolamine	141-43-5	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Monoethanolamine	141-43-5	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Monoethanolamine	141-43-5	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
Monoethanolamine	141-43-5	EC50 (72h) 2.5 mg/L (Pseudokirchnerella subcapitata) EC50 (72h) 24.70 mg/L (Phaeodactylum tricornutum)	LC50 (96h) 170 mg/L (Carassius auratus) NOEC (14d) > 100 mg/L (Oryzias latipes)	No information available	EC50 (48h) 65 mg/L (Daphnia magna) NOEC (21d) 0.85 mg/L (Daphnia magna) EC50 (72h) 27.57 mg/L (Crassostrea gigas) EC50 (72h) 18.17 mg/L (Mytilus galloprovincialis) EC50 (72h) 43 mg/L (Artemia franciscana)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Monoethanolamine	141-43-5	Readily biodegradable (92% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Monoethanolamine	141-43-5	Log Pow = -1.91 Log Pow = 2.34

12.4. Mobility in soil

Substances	CAS Number	Mobility
Monoethanolamine	141-43-5	KOC = 0.2725 KOC = 1.167

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

Substances	PBT and vPvB assessment
Monoethanolamine	Not PBT/vPvB

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: UN2491
UN Proper Shipping Name: Ethanolamine Solution
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable

RID

UN Number: UN2491
UN Proper Shipping Name: Ethanolamine Solution
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable

ADR

UN Number: UN2491
UN Proper Shipping Name: Ethanolamine Solution

Transport Hazard Class(es): 8
 Packing Group: III
 Environmental Hazards: Not applicable

IATA/ICAO

UN Number: UN2491
 UN Proper Shipping Name: Ethanolamine Solution
 Transport Hazard Class(es): 8
 Packing Group: III
 Environmental Hazards: Not applicable

14.1. UN Number: UN2491

14.2. UN Proper Shipping Name: Ethanolamine Solution

14.3. Transport Hazard Class(es): 8

14.4. Packing Group: III

14.5. Environmental Hazards: Not applicable

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

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 All components listed on inventory or are exempt.

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

Yes

SECTION 16: Other Information

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

H302 - Harmful if swallowed
 H312 - Harmful in contact with skin
 H332 - Harmful if inhaled
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H335 - May cause respiratory irritation
 H412 - Harmful 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/

Revision Date: 15-Sep-2015

Revision Note

SDS sections updated: 1

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