CHEMORAN

Revision: N°6 (27/06/2013)

Date: 12/09/2013 Page 1/10



Name: GAP

SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 453/2010)

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

1.1. Product identifier

Product name: GAP

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

Emulsifier for mixing grade bitumen emulsions

1.3. Details of the supplier of the safety data sheet

Registered company name: **CHEMORAN**

Address: Oranmore GAI WAY Ireland Telephone: 353 91 794 134 Fax: 353 91 794 675

info@chemoran.com

http://www.chemoran.com/index.php

1.4. Emergency telephone number : 353 91 794 134.

Association/Organisation:

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin corrosion, Category 1B (Skin Corr. 1B, H314).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

Specific target organ toxicity (repeated exposure), Category 2 (STOT RE 2, H373).

Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

Serious effects after prolonged or repeated oral exposure: harmful (Xn, R 48/22).

Corrosive (C, R 34).

Skin sensitisation (Xi, R 43).

Aquatic environmental hazard, chronic toxicity: toxic (N, R 51/53).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms:









GHS05

GHS09

GHS07

GHS08

Signal Word: **DANGER**

Product identifiers:

FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH DIETHYLENETRIAMINE, MALEIC ANHYDRIDE, FC 273-601-0

TETRAETHYLENEPENTAMINE AND TRIETHYLENETETRAMINE

EC 272-787-0 AMINES, N-TALLOW ALKYLTRIPROPYLENETETRA-EC 263-189-0 AMINES, N-TALLOW ALKYLTRIMETHYLENEDI-

Additional labeling:

For professional use only.

Hazard statements:

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or repeated exposure (if swallowed).

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

Date: 12/09/2013 Page 2/10

Revision: N°6 (27/06/2013)

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements - Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response :

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 IF INHALED: Remove victim 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.

P314 Get medical advice/attention if you feel unwell.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

Precautionary statements - Storage:

P405 Store locked up.

Precautionary statements - Disposal:

P501 Dispose of contents/container to hazardous or special waste collection centre.

2.3. Other hazards

The mixture does not contain any substances classified as 'Substances of Very High Concern' (SVHC) by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

No substances fulfil the criteria set forth in annexe II section A of the REACH regulation (EC) n° 1907/2006.

3.2. Mixtures

Composition:

Odinposition .	(50) 4070/0000	107/540/550	The c	10/
Identification	(EC) 1272/2008	67/548/EEC	Note	%
CAS: 68990-47-6	GHS07	Xi		50 <= x % < 100
EC: 273-601-0	Wng	Xi;R43		
REACH: 01-2119496070-42-0004	Skin Sens. 1, H317			
FATTY ACIDS, TALL-OIL, REACTION				
PRODUCTS WITH DIETHYLENETRIAMINE,				
MALEIC ANHYDRIDE,				
TETRAETHYLENEPENTAMINE AND				
TRIETHYLENETETRAMINE				
INDEX: 603-096-00-8	GHS07	Xi	[1]	25 <= x % < 50
CAS: 112-34-5	Wng	Xi;R36	' '	
EC: 203-961-6	Eye Irrit. 2, H319	,		
2-(2-BUTOXYETHOXY)ETHANOL				
CAS: 68911-79-5	GHS07, GHS05, GHS09,	C,N		10 <= x % < 25
EC: 272-787-0	GHS08	C:R34		
REACH: 01-2119486995-14	Dgr	Xn;R48/22-R22		
	Acute Tox. 4, H302	N;R50/53		
AMINES, N-TALLOW	Skin Corr. 1B, H314	,		
ALKYLTRIPROPYLENETETRA-	STOT RE 2, H373			
	Aguatic Acute 1, H400			
	M Acute = 1			
	Aquatic Chronic 1, H410			
	M Chronic = 1			
	M Chronic = 1			

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

Date: 12/09/2013 Page 3/10

Revision: N°6 (27/06/2013)

CAS: 61791-55-7	GHS07, GHS05, GHS09,	T,N	1	1 <= x % < 2.5
EC: 263-189-0	GHS08	T;R48/25		
	Dgr	C;R34		
AMINES, N-TALLOW ALKYLTRIMETHYLENEDI-	Acute Tox. 4, H302	Xn;R22		
,	Skin Corr. 1B, H314	N;R50		
	STOT RE 1, H372	,		
	Aquatic Acute 1, H400			
	M Acute = 1			
CAS: 61790-33-8	GHS07, GHS05, GHS09,	C,N	C) <= x % < 1
EC: 263-125-1	GHS08	C;R35		
	Dgr	Xn;R48/22-R22		
AMINES, TALLOW ALKYL	Acute Tox. 4, H302	Xi;R37		
	Skin Corr. 1A, H314	N;R50		
	STOT SE 3, H335			
	STOT RE 2, H373			
	Aquatic Acute 1, H400			
	M Acute = 1			

Information on ingredients:

[1] Substance for which maximum workplace exposure limits are available.

SECTION 4: FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing in an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation:

Remove the affected person to fresh air, obtain medical attention if symptoms persist.

In the event of splashes or contact with eyes :

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open.

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

In the event of splashes or contact with skin:

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Remove any soiled or splashed clothing immediately.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing:

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

Rinse out one's mouth with milk or water to relieve affected area. Do not induce vomiting to avoid any heartburn.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable methods of extinction

Foam, powder, CO2

Unsuitable methods of extinction

In the event of a fire, do not use:

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

Date: 12/09/2013 Page 4/10

Revision: N°6 (27/06/2013)

In the event of a fire, the following may be formed:

- carbon monoxide (CO)
- carbon dioxide (CO2)

5.3. Advice for firefighters

Use a self- contained breathing apparatus

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non fire-fighters

Avoid any contact with the skin and eyes.

For fire-fighters

Fire-fighters will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Neutralise with an acidic decontaminant.

Clean preferably with a detergent, do not use solvents.

Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

No data available.

SECTION 7: HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure that there is adequate ventilation, especially in confined areas.

Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

Fire prevention:

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

Recommended equipment and procedures:

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid exposure - obtain special instructions before use.

Packages which have been opened must be closed carefully and stored in an upright position.

Prohibited equipment and procedures:

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep the container tightly closed in a dry, well-ventilated place.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area

Keep the product in its original container in a well ventilated and fresh place.

Packaging

Always keep in packaging made of an identical material to the original.

Suitable packaging materials :

- Stainless steel

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

Date: 12/09/2013 Page 5/10

Revision: N°6 (27/06/2013)

Unsuitable packaging materials:

- copper, aluminium, zinc and their alloys.

7.3. Specific end use(s)

No data available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

- European Union (2009/161/EU, 2006/15/EC, 2000/39/EC, 98/24/EC)

CAS VME-mg/m3: VME-ppm: VLE-mg/m3: VLE-ppm: Notes: 112-34-5 67.5 10 101.2 15 -

- France (INRS - ED984 :2008) :

CAS VME-ppm: VME-mg/m3: VLE-ppm: VLE-mg/m3: Notes: TMP No:

112-34-5 10 67.5 15 101.2 - -

8.2. Exposure controls

Suitable technical inspections

Well ventilated workplace.

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):









Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- Neoprene® (Polychloroprene)

Recommended properties:

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact.

Wear suitable protective clothing and, in particular, an apron and boots. These items of clothing shall be maintained in good condition and cleaned after use.

Suitable type of protective boots:

In the event of minor spatter, wear protective boots or half-boots against chemical risks in accordance with standard EN13832-2.

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

In the event of prolonged contact, wear boots or half-boots with liquid-chemical-resistant and waterproof soles and uppers in accordance with standard EN13832-3.

Date: 12/09/2013 Page 6/10

Revision: N°6 (27/06/2013)

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information:

Physical state: fluid liquid.

Important health, safety and environmental information

Not stated.

slightly basic. not relevant.

not relevant.

Boiling point/boiling range: Flash Point Interval: PE > 100°C. Vapour pressure (50°C): not relevant. Density: < 1

Water solubility: Insoluble. Melting point/melting range: not relevant. Self-ignition temperature : not relevant.

9.2. Other information

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

Aspect:

Appearance: liquid at 20°C

- colour : black or brownish-black

- odour : neutral Flash point (PM cc): >100°C

Decomposition point/decomposition range:

375 mPa.s @ 25°C Viscosity: 0.991 @ 25°C Density:

Solubility:

- insoluble in water

soluble - in organic usual solvents :

SECTION 10: STABILITY AND REACTIVITY

Practically unlimited life under normal storage conditions.

10.1. Reactivity

No reactivity under normal conditons.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

10.5. Incompatible materials

Keep away from:

- strong acids
- strong oxidising agents
- halogen compounds

10.6. Hazardous decomposition products

The thermal decomposition may release/form:

- carbon monoxide (CO)
- carbon dioxide (CO2)

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

May cause irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following exposure between three minutes and one hour.

Date: 12/09/2013 Page 7/10

Revision: N°6 (27/06/2013)

Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.

May cause an allergic reaction by skin contact.

May cause severe damage to organs in the event of repeated or prolonged exposure.

11.1.<u>1. Substances</u>

No toxicological data available for the substances.

11.1.2. Mixture

No toxicological data available for the mixture.

SECTION 12: ECOLOGICAL INFORMATION

Toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC1907/2006.

12.6. Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging:

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14: TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2013 - IMDG 2012 - ICAO/IATA 2013).

14.1. UN number

2735

14.2. UN proper shipping name

UN2735=AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

(amines, n-tallow alkyltripropylenetetra-)

CHEMORAN

Name: GAP

Date: 12/09/2013 Page 8/10 Revision: N°6 (27/06/2013)

14.3. Transport hazard class(es)

- Classification :



8

14.4. Packing group

Ш

14.5. Environmental hazards

- Environmentally hazardous material :



14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	8	C7	II	8	80	1 L	274	E2	2	E
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ			
	8	-	H	1 L	F-A,S-B	274	E2			
			•							
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	8	-	H	851	1 L	855	30 L	A3	E2	
								A803		
	8	-	H	Y840	0.5 L	-	-	A3	E2	
						1		A803		

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available.

SECTION 15: REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- Directive 67/548/EEC and its adaptations
- Directive 1999/45/EC and its adaptations
- Regulation EC 1272/2008 modified by regulation EC 618/2012

- Container information:

No data available.

Usage restrictions apply to the product: See annex XVII of EC regulation No. 1907/2006.

For professional users only.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

No data available.

Version: N°2 (08/08/2013)

CHEMORAN

Name: GAP

SECTION 16: OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

Date: 12/09/2013 Page 9/10

Revision: N°6 (27/06/2013)

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

Hazard symbols:





Corrosive Dangerous for the environment

Contains: 603-096-00-8 2-(2-BUTOXYETHOXY)ETHANOL EC 263-125-1 AMINES, TALLOW ALKYL

FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH DIETHYLENETRIAMINE, MALEIC ANHYDRIDE, FC 273-601-0

TETRAETHYLENEPENTAMINE AND TRIETHYLENETETRAMINE

EC 272-787-0 AMINES, N-TALLOW ALKYLTRIPROPYLENETETRA-EC 263-189-0 AMINES, N-TALLOW ALKYLTRIMETHYLENEDI-

Risk phrase:

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 43 May cause sensitisation by skin contact.

Harmful: danger of serious damage to health by prolonged exposure if swallowed. R 48/22

R 34 Causes burns.

For professional use only.

Safety phrase:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 26

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

S 60 This material and its container must be disposed of as hazardous waste. S 57 Use appropriate container to avoid environmental contamination

Product submitted to restrictions on the marketing and use: see Directive 76/769/EEC and its ensuing

adaptations.

Title for H, EUH and R indications mentioned in section 3:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure .
H373	May cause damage to organs through prolonged or repeated exposure .
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
R 22	Harmful if swallowed.
R 34	Causes burns.
R 35	Causes severe burns.
R 36	Irritating to eyes.
R 37	Irritating to respiratory system.
R 43	May cause sensitisation by skin contact.
R 48/22	Harmful: danger of serious damage to health by prolonged exposure if swall
D 49/25	Toxic: danger of serious damage to health by prolonged exposure if swallow

llowed. R 48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.

R 50 Very toxic to aquatic organisms.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Date: 12/09/2013 Page 10/10 Revision: N°6 (27/06/2013) Version: N°2 (08/08/2013) CHEMORAN

Name: GAP

Abbreviations:

ADR: European agreement concerning the international carriage of dangerous goods by Road.

IMDG: International Maritime Dangerous Goods. IATA: International Air Transport Association. ICAO: International Civil Aviation Organisation

RID: Regulations concerning the International carriage of Dangerous goods by rail.

GHS05: Corrosion GHS07: Exclamation mark GHS08: Health hazard GHS09: Environment