

Safety Data Sheet dated 10/9/2014, version 1 In compliance with Regulation (EC) 453/2010

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Mixture identification:

Trade name: FRYFIX
Product type: caustic cleaner

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

Recommended use:

Washing and cleaning products (including solvent based products)

Washing and out

Not available

1.3. Details of the supplier of the safety data sheet

Supplier

AirChem Consumables. Sharjah Airport International Zone (SAIF Zone, A2-099), Sharjah, UAE. P.O. BOX 8994.

TEL: +971 6 552 8946 FAX: +971 6 552 8947, Email: airacc@acc.ae

Competent person responsible for the safety data sheet:

airacc@acc.ae

1.4. Emergency telephone number

AirChem Consumables, TEL: +971 6 552 8946 FAX: +971 6 552 8947, Email: airacc@acc.ae

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols:

Xn Harmful

C Corrosive

R Phrases:

R22 Harmful if swallowed.

R35 Causes severe burns.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:



Symbols:

C Corrosive

R Phrases:

R22 Harmful if swallowed.

R35 Causes severe burns.

S Phrases:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contents:

Potassium hydroxide Sodium hydroxide

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:

20 - 30 % Potassium hydroxide

REACH N°: 01-2119487136-33, Index number: 019-002-00-8, CAS: 1310-58-3, EC: 215-181-3

Xn,C; R22-35

2.16/1 Met. Corr. 1 H290



3.2/1A Skin Corr. 1A H314



3.1/4/Oral Acute Tox. 4 H302

5 - 15 % Sodium hydroxide

REACH N°: 01-2119457892-27-XXXX, Index number: 011-002-00-6, CAS: 1310-73-2, EC: 215-185-5

C: R35

3.2/1A Skin Corr. 1A H314

1-5% Sodium silicate

REACH N°: 01-2119448725-31-XXXX, CAS: 1344-09-8, EC: 215-687-4

Xi; R36/38

3.3/2 Eye Irrit. 2 H319

3.2/2 Skin Irrit. 2 H315

0.1-1.0 % Sodium nitrite

REACH N°: 01-2119471836-27-XXXX, Index number: 007-010-00-4, CAS: 7632-00-0, EC: 231-555-9

O.T.N: R25-50-8

2.14/3 Ox. Sol. 3 H272

3.3/2 Eye Irrit. 2 H319



4.1/A1 Aquatic Acute 1 H400



3.1/3/Oral Acute Tox. 3 H301

Declaration of ingredients according to Detergent Regulation 648/2004:

< 5 % EDTA and salts

For the complete text of the hazard and risk phrases refer to paragraph 16

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed

immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an

opthalmologist immediately.

Protect uninjured eye. In case of Ingestion:

Do NOT induce vomiting.

Give nothing to eat or drink.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

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

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

For more information see Technical date bulletin

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Contained substances

Potassium hydroxide - CAS: 1310-58-3

ACGIH - STE mg/m3: 2 - STE ppm: 0.87 - Behaviour: Binding - Notes: Short: C.Irritation of the skin, respiratory and eye irritation.

OEL - LTE mg/m3: 2 - STE mg/m3: 2 - STE ppm: 0.87 - Behaviour: Binding

Sodium hydroxide - CAS: 1310-73-2

ÅCGIH - STE mg/m3: C 2 - STE ppm: C 1.22 - Behaviour: Binding - Notes: After swallowing: burns to the mouth and esophagus, perforation of the gastrointestinal tract. Tissue necrosis. C respiratory irritation, eye and skin

Sodium silicate - CAS: 1344-09-8

OEL - LTE mg/m3: 2 - Behaviour: Binding

DNEL Exposure Limit Values

Potassium hydroxide - CAS: 1310-58-3

Worker Professional: 1 mg/m3 - Consumer: 1 - U.M.: mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

Sodium hydroxide - CAS: 1310-73-2

Worker Professional: 1 mg/m3 - Consumer: 1 - U.M.: mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

Sodium silicate - CAS: 1344-09-8

Worker Professional: 1.59 mg/kg - Consumer: 0.8 - U.M.: mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 5.61 mg/m3 - Consumer: 1.38 - U.M.: mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 0.8 - U.M.: mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Sodium silicate - CAS: 1344-09-8

Target: Fresh Water - Value: 7.5 mg/l Target: Marine water - Value: 1 mg/l Target: Occasional issue - Value: 7.5 mg/l

Target: Sewerage treatment plants - Value: 348 mg/l - Notes:: Pseudomonas putida

Sodium nitrite - CAS: 7632-00-0

Target: Fresh Water - Value: 0.0054 mg/l
Target: Marine water - Value: 0.00616 mg/l
Target: Occasional issue - Value: 0.0054 mg/l
Target: Freshwater sediments - Value: 0.0195 mg/kg
Target: Marine water sediments - Value: 0.0223 mg/l

Target: Sewerage treatment plants - Value: 21 mg/l

Target: Soil - Value: 0.000733 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton. Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour: Clear liquid Odour: not defined Odour threshold: n.av. mg/m3 > 13 Melting point / freezing point: initial 0 °C Initial boiling point and boiling range: initial 100 °C Solid/gas flammability: Upper/lower flammability or explosive limits: na % v/v Vapour density (air=1): > 1 Flash point: none °C Evaporation rate: Vapour pressure: 3.2 kPa Relative density: 1.40 g/ml Solubility in water: complete Solubility in oil: Partition coefficient (n-octanol/water): n.av.

Partition coefficient (n-octanol/water):

Auto-ignition temperature:

Decomposition temperature:

Viscosity:

n.av. °C

n.av. °C

n.av. mPa.s

Explosive properties:

none

Oxidizing properties:

not Oxidant

9.2. Other information

Miscibility: complete in water Fat Solubility: Negligible Conductivity: n.av.

Substance Groups relevant properties:

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with halogenated organic substances, and elementary metals.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the main substances found in the mixture:

Potassium hydroxide - CAS: 1310-58-3

a) acute toxicity:

LD50 Oral Rat = 333 mg/kg

Sodium hydroxide - CAS: 1310-73-2

a) acute toxicity:

LD50 Oral Rat = 2000 mg/kg

LC50 Inhalation Mouse = 4800 mg/l 1 hour

LD50 Skin Rabbit = 1350 mg/kg LCLo Oral Rabbit = 500 mg/kg

b) skin corrosion/irritation:

Skin Corrosive Skin Positive OECD 435 in vitro study

Eye Corrosive Skin Rabbit Positive irreversible effects

Sodium silicate - CAS: 1344-09-8

a) acute toxicity:

LD50 Oral Rat = 3400 mg/kg LD50 Inhalation Rat > 2.06 g/m3

LD50 Skin Rat > 5000 mg/kg

b) skin corrosion/irritation:

Skin Irritant Skin Rabbit Positive

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c) serious eye damage/irritation:
                           Eye Irritant EYES Rabbit Positive
                   Sodium nitrite - CAS: 7632-00-0
                   a) acute toxicity:
                           LD50 Oral Rat = 180 mg/kg
                           LD50 Inhalation Rabbit = 5500 mg/kg 4 hours
       If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.AV.:
               a) acute toxicity;
               b) skin corrosion/irritation;
               c) serious eye damage/irritation;
               d) respiratory or skin sensitisation;
               e) germ cell mutagenicity;
               f) carcinogenicity;
               g) reproductive toxicity;
               h) STOT-single exposure;
               i) STOT-repeated exposure;
               j) aspiration hazard.
SECTION 12: Ecological information
       12.1. Toxicity
               Based on the information available it is not expected that this product may cause any adverse environmental effect when use
               instructions and disposal recommendations are followed.
               Adopt good working practices, so that the product is not released into the environment.
       List of substances hazardous to the environment and eco-toxicological information available:
               Potassium hydroxide - CAS: 1310-58-3
               a) Aquatic acute toxicity:
                       LC50 Fish = 80 mg/l 96 Gambusia affinis
                       LC50 Bacteria = 80 mg/l 24 Mosquito
               Sodium hydroxide - CAS: 1310-73-2
               a) Aquatic acute toxicity:
                       LC50 Fish = 125 mg/l 96 Gambusia affinis
                       EC50 Daphnia = 40.4 mg/l 48 Ceriodaphnia dubia
               Sodium silicate - CAS: 1344-09-8
               a) Aquatic acute toxicity:
                       LC50 Fish = 1108 mg/l 96 Brachydanio rerio
                       LC50 Fish > 260 mg/l 96 Oncorhynchus mykiss
                       LC50 Fish -1 320 mg/l 96 Oncorhynchus mykiss
                       EC50 Daphnia = 1700 mg/l 48 Daphnia magna
                       EC50 Algae = 207 mg/l 72 Scenedesmus subspicatus
               b) Aquatic chronic toxicity:
                       NOEL Fish = 348 mg/l 96 Brachydanio rerio
               Sodium nitrite - CAS: 7632-00-0
               a) Aquatic acute toxicity:
                       LC50 Fish > 0.54 mg/l 96 Oncorhynchus mykiss
                       LC50 Fish -1 26.3 mg/l 96 Oncorhynchus mykiss
                       EC50 Daphnia = 15.4 mg/l 48 Daphnia magna
                       EC50 Algae > 100 mg/l 72 Scenedesmus subspicatus
               b) Aquatic chronic toxicity:
                       NOEC Daphnia = 9.86 mg/l 1920 Daphnia
                       NOEC Fish = 6.16 mg/l 744 lctalurus punctatus
       12.2. Persistence and degradability
               Potassium hydroxide - CAS: 1310-58-3
                       Biodegradability: Non-readily biodegradable - Test: Not applicable - Duration: Not applicable - %: Not applicable - Notes: Not
               Regulation (EC) No. 648/2004 on Detergents and amendments:
                       Not applicable
       12.3. Bioaccumulative potential
               Sodium hydroxide - CAS: 1310-73-2
                       Bioaccumulation: Not bioaccumulative - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable
               Sodium silicate - CAS: 1344-09-8
                       Bioaccumulation: Not bioaccumulative - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable
       12.4. Mobility in soil
               Sodium hydroxide - CAS: 1310-73-2
                       Mobility in soil: Mobile - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable
               Sodium nitrite - CAS: 7632-00-0
                       Mobility in soil: Not mobile - Test: Not applicable Not applicable - Duration: Not applicable - Notes: Not applicable
       12.5. Results of PBT and vPvB assessment
               vPvB Substances: None - PBT Substances: None
       12.6. Other adverse effects
               None
SECTION 13: Disposal considerations
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13.1 Waste treatment methods

Product and its residue:

Do not dispose in the canals of wastewater, waterways and soil.

The codes indicating the type of waste are considered based on the recommendations and scheduled use of this product.

Different codes may be assigned bused on the end user's use and the characteristics of the disposal.

Waste code CER/EWC (2000/532/CE), attributable to the product as:

11 01 07 * pickling bases

H8 corrosive

Any remaining product should be disposed of with the material.

Containers/contaminated packaging

Containers, even completely empty, must not be disposed in the environment. The packigings which can not be cleaned should be disposed of as the material.

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information



14.1. UN number

 ADR-UN Number:
 3266

 IATA-UN Number:
 3266

 IMDG-UN Number:
 3266

14.2. UN proper shipping name

ADR-Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide, Sodium

hydroxide)

IATA-Shipping Name: CORROSÍVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide, Sodium

hydroxide)

IMDG-Shipping Name: CORROSÍVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium hydroxide, Sodium

hydroxide)

14.3. Transport hazard class(es)

ADR-Class: 8
ADR - Hazard identification number: 80
IATA-Class: 8
IATA-Label: 8
IMDG-Class: 8
14.4. Packing group

ADR-Packing Group: II
IATA-Packing group: II
IMDG-Packing group: II
14.5. Environmental hazards

ADR-Enviromental Pollutant: IMDG-Marine pollutant:

14.6. Special precautions for user ADR-Subsidiary risks:

 ADR-S.P.:
 274

 ADR-Tunnel Restriction Code:
 (E)

 IATA-Passenger Aircraft:
 851

 IATA-Subsidiary risks:

 IATA-Cargo Aircraft:
 855

 IATA-S.P.:
 A3 A803

 IATA-ERG:
 8L

IMDG-EmS: F-A , S-B

IMDG-Subsidiary risks:

IMDG-Storage category: Category B

IMDG-Storage notes: Clear of living quarters. "Separated from" acids.

No

No

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

No

SECTION 15: Regulatory information

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

Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)

Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Dir. 2006/8/EC

Regulation (EC) n. 1907/2006 (REACH) Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 453/2010 (Annex I) Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

None

Where applicable, refer to the following regulatory provisions:

Regulation (EC) nr 648/2004 and CE N. 907/2006 (Detergents).

Directive 2003/105/EC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) n° 648/2004 (detergents).

1999/13/EC (VOC directive)

Volatile Organic compounds - VOCs = 0.00 %

Volatile Organic compounds - VOCs = 0.00 g/l

Volatile CMR substances = 0.00 %

Halogenated VOCs which are assigned the risk phrase R40 = 0.00 %

Organic Carbon - C = 0.00

15.2. Chemical safety assessment

Not available

SECTION 16: Other information

Full text of phrases referred to in Section 3:

R22 Harmful if swallowed.

R25 Toxic if swallowed.

R35 Causes severe burns.

R36/38 Irritating to eyes and skin.

R50 Very toxic to aquatic organisms.

R8 Contact with combustible material may cause fire.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H272 May intensify fire; oxidiser.

H400 Very toxic to aquatic life.

H301 Toxic if swallowed.

This document was prepared by a competent person who has received appropriate training.

This MSDS cancels and replaces any preceding release.

Where applicable, refer to the following regulatory provisions :

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments;

Regulation (EC) n°1272/2008; Regulation (EC) N. 790/2009 (annex VI), Regulation (EC) n. 1907/2006 (REACH). Commmission Directive 1999/45/EC (Classification, packaging and labelling of dangerous preparation) and subsequent amendments; Commmission Directive n. 2006/8/CE.

Regulation (EC) nr 648/2004 and CE N. 907/2006 (Detergents).

Directive 2003/105/EC ('Activities linked to risks of serious accidents') and subsequent amendments.

Directive 2013/10/EU (aerosols) amending Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) n° 1272/2008 on classification, labelling and packaging of substances and mixtures and subsequent amendments.

Regulation (EC) No 1223/2009 on cosmetic products and subsequent amendments.

Regulation (EU) No 126/2013 amending Annex XVII to Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and subsequent amendments. Regulation (EC) N. 304/2003 and subsequent amendments. Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products and subsequent amendments.

Directives 91/156/CEE, 91/689/CEE, 94/62/CE (Disposal of waste) and subsequent amendments.

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), current edition.

regulations IATA/ICAO = Dangerous Goods Regulations by air, current edition.

RID = Regulations concerning the International Carriage of Dangerous Goods by Rail, current edition.

IMDG Code = International Maritime Dangerous Goods Code produced by the International Maritime Organization (IMO), current edition

Directive 91/271/EEC and 91/676/CEE (protection of waters) and subsequent amendments.

Main bibliographic sources:

ESIS: European chemical Substances Information System and Environmental hazard classification.

Occupational exposure limit values (Commission Directives 2000/39/EC and 2006/15/CE)

ACGIH - TLV's for 2010

NIOSH - Registry of toxic effects of chemical substances (1983)

Material Safety Data Sheets of chemicals, REACH database

Material Safety Data Sheet and Technical Data of raw material as by Supplier

The ISS National Inventory of Chemical Substances (INSC)

Abbreviations and acronyms:

TLV-TWA = Thréshold Limit Value- time-weighed average, 8-hour workday, 40-hour workweek; TLV-STEL-15 min = Threshold Limit Values - Short Term Exposure Limit; TLV-C = Ceiling exposure limit; Notes: IBE= Biological Exposure Indices; SEN= sensitizer; Skin= Can be absorbed through the skin. Carcinogenicity categories: A1 / A2 = confirmed / suspected human carcinogen; A3 = Animal carcinogen; A4 / A5 = Not Classificable/not suspected as a human carcinogen. ACGIH = American Conference on

Governmental Industrial Hygienists. OEL =Occupational Exposure Limit. VLPE = Occupational Exposure Limit Values. LTE =long term exposure, STE=short term exposure. n.av.= Not Available, n.a. = not applicable; LD50=lethal dose (solids and liquids), LC50=lethal concentration (gases) that will kill 50% of the test animals; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. Regulations IATA/ICAO = Dangerous Goods Regulations by air, current edition. RID = Regulations concerning the International Carriage of Dangerous Goods by Rail, current edition. IMDG Code = International Maritime Dangerous Goods Code produced by the International Maritime Organization (IMO), current edition. PBT = Persistent, Bioaccumulative and Toxic substances.; vPvB = very Persistent and very Bioaccumulative substances; CMR = Carcinogenic, mutagenic or reproduction toxic substances. The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.