

# M-Blue F&S Detergent Portfolio



PVA Hygiene provides an innovative and sustainable method of cleaning. As the UK's leading manufacturer of water-soluble cleaning products, we cover all areas of commercial cleaning. Over 24 years, we have developed a system using pre-dosed sachets that is straightforward to implement and balances environment diligence with commercial demands. Based in the South West of England, we distribute globally.



This portfolio contains documents relating to PVA Hygiene's M-BLUE F & S detergent.

This unique formulation is contained within a paper film that dissolves at the point of use. The sachets are dry, compact and light, they reduce storage space and transportation costs, and heavily reduce the environmental implications often associated with delivering cleaning supplies. The sachets are packed in planet friendly packaging, that can either be composted or recycled, helping you to eliminate single-use plastic from your current cleaning procedure.



#### CONTENTS:

- 1) Technical Data Sheet.
- 2) Use Solution Health and Safety Summary.
- 3) 4 Rail Approval.
- 4) Product Safety Data Sheet.



#### PRODUCT DESCRIPTION

M- Blue F&S Detergent is a heavy-duty, perfume-free multipurpose surface detergent suitable for floors, worktops, shelves and entrance ways in municipal areas. Sachets contain a blend of biodegradable chelates, carbonates and biodegradable surfactants.

The product is packed in a convenient water-soluble sachet, allowing easy and safe dosing control.

Sachets are supplied in the following Pack Sizes:-

| Pack Size | Sachet Type | Order Code | Outer Pack |
|-----------|-------------|------------|------------|
| 50 * 13g  | Paper       | PA14:50    | Pouch      |

- Supplied in a convenient Paper water soluble sachet within a compostable pouch.
  - Phosphate Free.
  - Perfume Free
  - EDTA Free.
  - Identifiable Colour.
- 

#### INSTRUCTIONS FOR USE

For general cleaning, remove any gross debris from the surface, place one sachet into an empty bucket and then fill with approximately 5ltr (half bucket) of clean water. Agitate the bucket to ensure the sachet fully dissolves. Mop the area to be cleaned, remembering to regularly refresh the solution on the mop head with clean liquid. Once the area has been cleaned, remove excess liquid by dry mopping and allow to air dry. For heavy soiling two sachets may be required.


Consider using appropriate signage to identify that cleaning is in progress and floors may be wet.

This product can also be used in scrubber drier machines.

Care should be taken on unsealed wood. This product is not suitable for Perspex and Acrylic plastic and care should be taken of decorative print finishes.

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**TECHNICAL DATA SUMMARY**

|  |  |
|--|--|
| Appearance   | Pale Blue /Powder  |
| Odour  | Fresh  |
| Foam   | Low  |
| pH of use solution  | 11.7 – 10.2  |
| Storage Temperature Range  | 0°C to +40°C   |
| Shelf Life of Sachet   | Minimum of 2 years under normal conditions of dry storage. |

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**EMERGENCY DETAILS**

For accident, emergency and health & safety information refer to the Safety Data Sheet for this product.

This product is registered with the UK National Poisons Information Service.

Office Hours Emergency Number +44 (0) 1934 862859

Outside Office Hours: - +44 (0)7967 149256 (This is for health, safety and environmental emergencies only, it is not for general enquires or ordering).

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**DISCLAIMER**

Whilst every effort is made to ensure that the information given in this product information sheet is accurate it is given without guarantee, since the conditions of use are beyond our control.

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| <b>IDENTIFICATION OF THE MATERIAL</b> |   |
|---------------------------------------|---|
| <b>Product Name</b>                   | <b>M-Blue F&amp;S Detergent use solution</b>  |
| <b>Main Use</b>                       | Fragrance Free Heavy Duty Multi Purpose Cleaner for hard surfaces and floors.                                   |
| <b>Uses Advised Against</b>           | Not for Direct Oral Consumption<br>Keep Out of Reach of Children<br>Do Not Mix with other Chemicals/Detergents. |
| <b>Manufacturer</b>                   | PVA Hygiene, Unit 6 Havyat Business Park<br>Havyat Road, Bristol, BS40 5PA                                      |
| <b>Telephone</b>                      | +44 (0) 1934 862859   |

| <b>PHYSICAL AND CHEMICAL PROPERTIES</b> |        |
|---|--------|
| <b>Appearance</b>                       | Liquid |
| <b>Colour</b>                           | Blue   |
| <b>pH</b>                               | >11    |



| <b>CLASSIFICATION, PPE, FIRST AID AND DISPOSAL</b> |  |
|--|--|
| <b>Health</b>                                      | In use solutions of this product have no Health Classifications  |
| <b>Physical</b>                                    | In use solutions of this product have no Physical Classifications  |
| <b>Environmental</b>                               | In use solutions of this product have no Environmental Classifications   |
| <b>PPE</b>   | No PPE is mandated for this product at use strength. However, we suggest safety shoes and Gloves, and because of the high pH, eye protection if a risk assessment indicates splashing to eyes is possible.   |
| <b>First Aid</b>                                   | <p><b>EYES:-</b><br/>May cause reddening, discomfort and blurred vision<br/>Rinse with Plenty of Water.</p> <p><b>SKIN:-</b><br/>Repeated extended contact may result in skin dryness.<br/>Use a suitable re-moisturising cream and get medical attention if symptoms persist.</p> <p><b>INHALATION:-</b><br/>Unlikely.</p> <p><b>INGESTION:-</b><br/>A soapy taste may be reported, together with irritation to mouth and GI Tract rinse mouth thoroughly.<br/>If concerned seek medical advice<br/>Show the label or Safety Data sheet to the Physician.</p> |
| <b>Disposal</b>                                    | Solutions can be disposed to normal sewers and septic tanks.   |



## ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT', SUPPLIED BY PVA HYGIENE LIMITED.

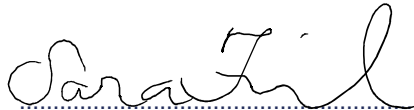
REPORT NUMBER 4RS-SF-230073-R733202

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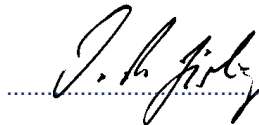
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12<sup>th</sup> October 2023

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# ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT', SUPPLIED BY PVA HYGIENE LIMITED

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| REPORT REVISION | ISSUE DATE                    | REVISION DETAILS |
|-----------------|-------------------------------|------------------|
| INITIAL ISSUE   | 12 <sup>TH</sup> OCTOBER 2023 | -                |
|                 |                               |                  |

**CONDITIONS OF ISSUE OF REPORTS.**

THIS REPORT IS ISSUED IN CONFIDENCE AND SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL FROM 4-RAIL SERVICES.

**FURTHER INFORMATION.**

REQUESTS FOR ADDITIONAL INFORMATION ON THE SUBJECT OF THIS REPORT OR OTHER QUERIES SHOULD BE ADDRESSED TO THE AUTHOR.

**ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT',  
SUPPLIED BY PVA HYGIENE LIMITED**

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# ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT', SUPPLIED BY PVA HYGIENE LIMITED

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## 1.0 INTRODUCTION

4-RAIL Services Limited was requested by Pam Cullinane of PVA Hygiene Limited to carry out an independent assessment of *M-Blue F&S Detergent*, a product currently being manufactured and marketed by PVA Hygiene Limited. *M-Blue F&S Detergent* is primarily intended as a heavy duty, perfume free multipurpose hard surface detergent, including the interior of rolling stock.

The assessment was carried out to reflect the requirement for this type of chemical product in the cleaning of rail vehicles within the railway depot environment, via manual application methods. It carried out in accordance with 4-RAIL Services Limited – Test Procedure 4RS-M133 Issue 3 – Protocol for the Assessment of Cleaning and Graffiti Removal Chemicals for Use on Rolling Stock.

The product was thus assessed in terms of the following facets and criteria:

- Health Hazard & Environmental Assessment and comment on product formulation.\*
- Surface Compatibility Test in which the suitability of the product for use on some typical interior materials of rolling stock was evaluated.
- Corrosion tests in which an aluminium coupon was immersed in the undiluted product.
- Product Efficacy Test in which the ability of the product to remove standard soiling agents from some typical exterior materials of rolling stock was evaluated.
- An assessment of the quality systems employed by the supplier.

\* - It should be noted that 4-RAIL Services Limited do not request or issue reports containing confidential formulation details from a manufacturer but instead rely on the manufacturer's integrity and statutory obligations in terms of the provision of comprehensive and correct information relating to the hazards associated with their products. Responsibility will not be accepted by 4-RAIL Services Limited for false or misleading information presented by product suppliers for review.

## 2.0 HEALTH HAZARD AND ENVIRONMENTAL ASSESSMENT

### 2.1 *Composition*

*M-Blue F&S Detergent* is blue coloured powder which is supplied in individual paper sachets. The paper sachets are then diluted in water for use. The manufacturer has advised that the pH of the generated solution is between 10.2 and 11.7. It comprises a blend of the following declared ingredients:

- *Sodium carbonate,*
- *Citric acid,*
- *β-Alanine, N-(2-carboxyethyl)-,N-coco alkyl derivatives, di sodium salt,*
- *Surfactants,*
- *Sodium Metasilicate,*
- *Sodium Hydroxide.*

This part of the assessment included the dispatch of a questionnaire to the supplier, which, on completion by the client, established the presence of any detectable quantities of a number of ingredients. The materials listed in this questionnaire have been included either for health and safety or environmental reasons, or because their presence would, in the opinion of 4-RAIL Services Limited, be detrimental to the product's performance. No additional ingredients were declared.

It should be noted that the inclusion of sodium hydroxide within the formulation for a product intended for rolling stock would be an automatic failure to meet the requirements of the 4RS protocol assessment. However, *M-Blue F&S Detergent* is supplied as a powder product which on mixing with water (as described in Section 2.2 below) instigates a reaction between the sodium hydroxide and citric acid present in the formulation. This reaction essentially removes the sodium hydroxide from the final use product. The formulation of the product is such that the citric acid is always present in excess of the quantity required to react with the sodium hydroxide present. Based on this information *M-Blue F&S Detergent* meets the requirements.

### 2.2 *Application*

*M-Blue F&S Detergent* is recommended for general and heavy duty cleaning in public areas, including the removal of general soiling from the interior parts of rolling stock.

PVA Hygiene Limited recommends diluting 1 sachet of *M-Blue F&S Detergent* into 5 litres of water. The sachet is placed into an appropriate bucket and 5 litres of warm water should then be added. The bucket is then agitated to ensure the contents fully dissolve. As the product dissolves effervescence should be noted where the sodium carbonate and citric acid (the excess remaining from the reaction with the sodium



# ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT', SUPPLIED BY PVA HYGIENE LIMITED

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hydroxide) react together, the resulting solution is then used. **It is extremely important that all the contents of the sachet have dissolved to prevent the unintended application of sodium hydroxide to vulnerable services.**

PVA-Hygiene Limited recommend application to surfaces by mopping, ensuring regular reapplication of product to the mop. A contact time of 5-10 minutes should prove sufficient for the removal of general soiling. Furthermore, it is recommended that the surface is agitated with soft brushes or cloths (including reusable micro-fibre cloths), to loosen tenacious soiling matter. Surfaces should always be rinsed with clean water to remove residual chemical and soiling matter. For heavily soiled areas two sachets can be used.

PVA Hygiene Limited also recommend the in-use solution of *M-Blue F&S Detergent* for use through scrubber driers.

## 2.3 Hazard Identification

Under the CLP Regulations, *M-Blue F&S Detergent* in its supplied powder form carries the following classifications:

Hazard Pictogram(s): GHS05



Signal Word: Danger

Hazard Statements: H314 Causes severe skin burns and eye damage  
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements: P102: Keep out of reach of children  
P264: Wash skin thoroughly after handling  
P273: Avoid release to the environment  
P280: Wear eye 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  
P304+P340: If inhaled, remove the person to fresh air and keep 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 so. Continue rinsing  
P401+P404: Store in a dry place. Store in a closed container  
P501: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

It should be noted that the above information applies to the solid powder present in the sachets prior to use. When the product has been mixed with water, the in-use solution has no hazard statements associated with it. It should also be noted that P501 will not apply as the sachet is dissolved in water alongside its contents, with no container to dispose of afterwards.

However, it is recommended that the following precautions are observed when using the product.

- Wear suitable eye protection to protect against the possibility of splashes contacting eyes or face.
- Wear suitable chemical resistant gloves to protect the hands and lower arms.
- Overalls and rubber boots should be worn to protect the rest of the body.

# ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT', SUPPLIED BY PVA HYGIENE LIMITED

## 2.4 Environmental Conditions

Manufacturer's literature indicates that the pH of the in-use solution of *M-Blue F&S Detergent* is between 10.2 and 11.7. Since the Consent to Discharge Effluents from many railway depots is frequently set within the range pH 6 – 11 it will may be necessary to neutralise any effluents resulting from the use of the product.

The in-use solution of *M-Blue F&S Detergent* should only be disposed of to the foul sewer in the course of its use, it should never be discharged to surface drains or any surface watercourses. It should be ensured that compliance with the local trade effluent discharge consent is maintained and depot managers should check with the local water authority to establish the precise parameters set for the site concerned before commencing use of the product.

Unused sachets of *M-Blue F&S Detergent* should be disposed of using a reputable waste disposal contractor.

## 2.5 Technical Comparison to Alternatives

A large number of products are available in the chemicals market for the cleaning of hard interior surfaces (including floors) of rolling stock, and for station cleaning activities. Most products are based on a blend of surfactants, sometimes with a small amount of alkali or solvent present to improve grease removal efficacy. Based on this *M-Blue F&S Detergent* is therefore typical of its class.

## 2.6 Acceptability

*M-Blue F&S Detergent* satisfactorily meets the requirements of the Health Hazard and Environmental Assessment.

## 3.0 SURFACE COMPATIBILITY ASSESSMENT

### 3.1 Method of Assessment

The assessment was conducted as outlined in with 4-RAIL Services Limited – Test Procedure 4RS-M133 Issue 3, Section 5. The standard test involved the test surfaces being exposed to the undiluted products for a 72-hour period. The test surfaces were subsequently rinsed with clean water, dried and inspected for colour/gloss change and a pencil hardness test performed to evaluate whether any softening had occurred. However for *M-Blue F&S Detergent* as the product is in powder form the product was tested in its use form, at the dilution recommended by PVA Hygiene Limited

### 3.2 Test Surface and Results

| PRODUCT NAME                    | TEST SURFACE   | SURFACE COMPATABILITY |
|---------------------------------|--|-----------------------|
| <i>M-Blue F&amp;S Detergent</i> | Aluminium panel coated with composite epoxy/polyurethane train paint | No Damage             |
|                                 | Aluminium panel with train interior polyester powder coating         | No Damage             |

### 3.3 Acceptability

4-RAIL Services Limited conclude that *M-Blue F&S Detergent* is compatible painted panels found on the interior and exterior of rolling stock.

It should be noted that PVA Hygiene Limited specify that the product is not safe on Perspex and acrylic plastics, so it is strongly recommended that the end user carry out any compatibility tests on any surfaces which are similar or may be vulnerable.

# ROLLING STOCK PROTOCOL ASSESSMENT OF 'M-BLUE F&S DETERGENT', SUPPLIED BY PVA HYGIENE LIMITED

## 4.0 CORROSION ASSESSMENT

### 4.1 Method of Assessment

Generally a preweighed aluminium coupon (Grade 6063) is placed into an undiluted sample of the product under test. The neat product is used because 4-RAIL Services Limited have encountered situations in which aluminium corrosion has occurred where cleaning agents have been able to concentrate on train structures e.g. behind window seals and in door mechanisms. However for *M-Blue F&S Detergent* as the product is in powder form the product was tested at the dilution recommended by PVA Hygiene Limited.

After 168 hours, the coupon was rinsed with water, dried and re-weighed. Any weight change was calculated as mg loss per square centimetre of aluminium and the result compared to the acceptability criterion.

### 4.2 Results

| PRODUCT NAME                    | WEIGHT CHANGE RECORDED / (MG/CM <sup>2</sup> ) | ACCEPTABILITY CRITERION / (MG/CM <sup>2</sup> ) | COMMENT |
|---------------------------------|--|---|---------|
| <i>M-Blue F&amp;S Detergent</i> | +0.01  | ± 3.0   | PASS    |

### 4.3 Acceptability

On the basis of this laboratory test, *M-Blue F&S Detergent* met the acceptability requirements of the Corrosion Assessment.

## 5.0 EFFICACY ASSESSMENT

### 5.1 Method of Assessment

The assessment was conducted as per 4-RAIL Services Limited – Test Procedure 4RS- M133 Issue 3, Section 6. This involved standard soiling agents being applied to the test surface and, after it had been in contact with the surface for 72 hours, removal was attempted using the product diluted according to manufacturer's instructions. The removal method has been standardised and assessed the efficacy of the chemical product in removing the soiling agent and the amount of physical agitation required to effect removal.

### 5.2 Results

| PRODUCT NAME                    | TEST SURFACE   | PRODUCT DILUTION        | SOILING AGENT                      | CLEANING EFFICACY  |
|---------------------------------|--|-------------------------|------------------------------------|--|
| <i>M-Blue F&amp;S Detergent</i> | Aluminium panel coated with composite epoxy/polyurethane train paint | one sachet per 5 litres | Track grease and tunnel dust paste | Good chemical action alone, some agitation needed to effect complete removal |
|                                 | Aluminium panel with train interior polyester powder coating         | one sachet per 5 litres | Track grease and tunnel dust paste | Good chemical action alone, some agitation needed to effect complete removal |

### 5.3 Acceptability

On the basis of this laboratory test, *M-Blue F&S Detergent* was found to perform satisfactorily and consequently passed the product efficacy test.

# ROLLING STOCK PROTOCOL ASSESSMENT OF '*M-BLUE F&S DETERGENT*', SUPPLIED BY PVA HYGIENE LIMITED

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## 6.0 SUPPLIER QUALITY ASSESSMENT

### 6.1 *Method of Assessment*

The majority of reputable manufacturers and distributors within the chemicals industry have demonstrable procedures in place for ensuring quality and traceability. It is widely considered within the rail industry that cleaning staff should only use chemical products from suppliers, which employ the latest industry standards for quality.

As a consequence, 4-RAIL Services Limited – Test Procedure 4RS-M133, includes the dispatch of a Supplier Quality Questionnaire to, and completion by, the chemical supplier.

### 6.2 *Result*

The resulting answers from the questionnaire indicate that PVA Hygiene Limited to be a reputable supplier with good quality systems in place. End users can be confident that products received from the company should be of a consistent and reproducible quality.

PVA Hygiene Limited therefore met the requirements of the Supplier Quality Assessment.

## 7.0 CONCLUSIONS

The assessment has demonstrated that *M-Blue F&S Detergent* has been satisfactorily formulated by PVA Hygiene Limited. The raw materials chosen are generally giving rise to the lowest possible health hazards. This conclusion is made with the caveat that the use of the product on rolling stock should be considered carefully by the end user.

This conclusion is equally applicable to rolling stock of London Underground Limited, the UK Train Operating Companies and the main UK train builders operating maintenance contracts.

This recommendation is made with the following caveats:

- Full training must be given to operatives authorised to use *M-Blue F&S Detergent* to ensure that no unreacted sodium hydroxide, present in the powder (supplied) form comes into contact with rolling stock.
- Storage of *M-Blue F&S Detergent* must be in a cool, dry location.
- It may be necessary for rail companies to assess the compatibility and efficacy characteristics on different types of rolling stock and other paint coatings by carrying out further depot trials.
- Specific final approvals for use of products can only be made by the regulating departments of the rail service operating company concerned.
- End users are always advised to follow the manufacturer's instructions and guidance provided on product label and Safety Data Sheets. Additionally, it is always necessary to perform a COSHH assessment for the specific activities being undertaken using the products.
- It is strongly recommended that end-users always request Certificates of Analysis or Certificates of Conformity for each batch of product received and maintain a stock control file with this information included. This will assist the end-user and PVA Hygiene Limited with setting up adequate audit trails from supply to use.

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : M-BLUE F&S Detergent  
UFI : G3DD-WA4E-011C-8YY3 (UFI for EU use only)  
Product code : PA14:50, A14:50

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Use of the substance/mixture : DETERGENT

##### 1.2.2. Uses advised against

Restrictions on use : Not for Oral Consumption, Not for Direct Application to Food Stuffs

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

##### Manufacturer

PVA HYGIENE  
UNIT 6 Havyat Business Park Havyat Road  
BS40 5PA Bristol – United Kingdom  
T +44 (0)1934 862 859  
[sales@pva-hygiene.co.uk](mailto:sales@pva-hygiene.co.uk)

#### 1.4. Emergency telephone number

Emergency number : 01934 862859 (Office Hours). For Immediate first aid advice in the UK call 111  
This product is registered with NPIS in the UK.

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP] and GB CLP Regulations

Skin corrosion/irritation, Category 1, Sub-Category 1B H314  
Serious eye damage/eye irritation, Category 1 H318  
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412  
Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

Note:- Use solutions are UNCLASSIFIED for Health, Environment and Physical Hazards.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) :

Danger

Contains :

Sodium Metasilicate; Alcohols C9-11, Ethoxylated; REACTION PRODUCT OF BENZENE SULPHONIC ACID, C10-C14 SEC ALKYL DERIVS and BENZENE SULPHONIC ACID 4 METHYL AND SODIUM HYDROXIDE; Sodium Hydroxide

Hazard statements (CLP) :

H314 - Causes severe skin burns and eye damage.  
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P102 - Keep out of reach of children.  
P264 - Wash Skin thoroughly after handling.

# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

P273 - Avoid release to the environment.  
P280 - Wear protective gloves, eye 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 water.  
P304+P340 - IF INHALED: Remove person to fresh air and keep 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.  
P402+P404 - Store in a dry place. Store in a closed container.  
P501 - Dispose of contents to local regulations.

### 2.3. Other hazards

This product does not contain any substances classified as PBT

This product does not contain any substances classified as vPvB.

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

Other information : To the best of our knowledge this product contains no Endocrine disrupting substances.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name  | Product identifier   | %                | Classification according to Regulation (EC) No. 1272/2008 [CLP] and GB CLP Regulations |
|---|--|------------------|--|
| sodium carbonate  | CAS-No.: 497-19-8<br>EC-No.: 207-838-8<br>EC Index-No.: 011-005-00-2<br>REACH-no: 01-2119485498-19 | $\geq 30 - < 50$ | Eye Irrit. 2, H319   |
| $\beta$ -Alanine, N-(2-carboxyethyl)-,N-coco alykyl derivs.,Disodium Salt   | CAS-No.: 90170-43-7<br>EC-No.: 290-476-8<br>REACH-no: 01-2119976233-35                             | $\geq 20 - < 30$ | Eye Irrit. 2, H319   |
| REACTION PRODUCT OF BENZENE SULPHONIC ACID, C10-C14 SEC ALKYL DERIVS and BENZENE SULPHONIC ACID 4 METHYL AND SODIUM HYDROXIDE | EC-No.: 932-051-8  | $\geq 8 - < 15$  | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Aquatic Chronic 3, H412                     |
| Citric Acid   | CAS-No.: 77-92-9<br>EC-No.: 201-069-1<br>EC Index-No.: 607-750-00-3                                | $\geq 5 - < 8$   | Eye Irrit. 2, H319<br>STOT SE 3, H335  |
| Sodium Metasilicate   | CAS-No.: 6834-92-0<br>EC-No.: 229-912-9<br>EC Index-No.: 014-010-00-8                              | $\geq 5 - < 8$   | Skin Corr. 1B, H314<br>STOT SE 3, H335   |
| Alcohols C9-11, Ethoxylated   | CAS-No.: 68439-46-3  | $\geq 3 - < 5$   | Acute Tox. 4 (Oral), H302<br>Eye Dam. 1, H318<br>Aquatic Chronic 2, H411               |
| Sodium Hydroxide  | CAS-No.: 1310-73-2<br>EC-No.: 215-185-5<br>EC Index-No.: 011-002-00-6                              | $\geq 1.5 - < 2$ | Skin Corr. 1A, H314  |

# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

| Specific concentration limits: |   |   |
|--------------------------------|---|---|
| Name                           | Product identifier  | Specific concentration limits   |
| Sodium Hydroxide               | CAS-No.: 1310-73-2<br>EC-No.: 215-185-5<br>EC Index-No.: 011-002-00-6 | ( 0.5 ≤C < 2) Skin Irrit. 2, H315<br>( 0.5 ≤C < 2) Eye Irrit. 2, H319<br>( 2 ≤C < 5) Skin Corr. 1B, H314<br>( 5 ≤C ≤ 100) Skin Corr. 1A, H314 |

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : If medical advice is needed, have product container or label at hand. For immediate First Aid advice in the UK, dial 111. When it is safe to do so, remove the victim immediately from the source of exposure. However, consideration should be given as to whether moving the victim will cause further injury. |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. If unconscious place in recovery position and seek medical advice.  |
| First-aid measures after skin contact | : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.   |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.   |
| First-aid measures after ingestion    | : Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention. If unconscious place in recovery position and seek medical advice.   |

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

|                                     |  |
|-------------------------------------|--|
| Symptoms/effects                    | : Neat product is likely to cause burns. In use solutions will be unclassified, but may cause irritation with repeated skin contact.   |
| Symptoms/effects after inhalation   | : Unlikely route of exposure, but inhalation of dilute solution droplets may result in a sore throat.  |
| Symptoms/effects after skin contact | : Causes severe burns.   |
| Symptoms/effects after eye contact  | : Causes serious eye burns.  |
| Symptoms/effects after ingestion    | : Unlikely route of exposure without deliberate abuse. If sachets are swallowed they may swell and could block the throat and GI tract. If Powder is ingested, irritation and burning to the mouth and GI tract may occur, a soapy taste may be reported. Ingestion of diluted solution is unlikely to cause long term harm, but a soapy taste may be reported together with mild irritation to the lips, throat and GI tract. |

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

Rinse with plenty of water. Check for abrasion to the surface of the eye from powder particles.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Use extinguishing agent suitable for surrounding fire. |
| Unsuitable extinguishing media | : Water.   |

### 5.2. Special hazards arising from the substance or mixture

|  |   |
|--|---|
| Fire hazard                                      | : The product is not flammable.               |
| Hazardous decomposition products in case of fire | : On heating corrosive fumes may be produced. |

### 5.3. Advice for firefighters

|                                |  |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|--|

# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Normal use solutions can be disposed to sewers and septic tanks. Large scale spillages or uncontrolled discharges into water systems must be reported to the relevant Environment Agency.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect and place spillage in suitable containers. Seal the containers and apply labelling to identify the material and hazards. For disposal see section 13 of this SDS. Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques.

#### 6.4. Reference to other sections

For further information refer to section 13. See sections 2,8,12,13 &14.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Carefully comply with the instructions for use. Avoid contact with eyes.  
Hygiene measures : Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry place. Store in a closed container.

#### 7.3. Specific end use(s)

This product is suitable for use for cleaning hard surfaces such as floors and walls. It is compatible with common materials of construction, but contact with unsealed wood and Perspex type plastics should be avoided. Although normal use solutions are unclassified, use of eye, hand and foot protection is recommended.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

| M-BLUE F&S Detergent                          |  |
|---|--|
| United Kingdom - Occupational Exposure Limits |  |
| Remark  | No exposure limits known for ingredients.            |
| Sodium Hydroxide (1310-73-2)                  |  |
| United Kingdom - Occupational Exposure Limits |  |
| Local name                                    | Sodium hydroxide                                     |
| WEL TWA (OEL TWA) [1]                         | ≤ 2 mg/m <sup>3</sup>                                |
| WEL STEL (OEL STEL)                           | 2 mg/m <sup>3</sup>                                  |
| Regulatory reference                          | UK (HSE EH40/2005 (Fourth edition, 2020) Publication |



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### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Gloves. Safety glasses.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses. In normal use eye protection is not required. During manufacture and packing operations, eye protection is recommended. Refer to EN166 to select appropriate level of protection.

#### 8.2.2.2. Skin protection

##### Hand protection:

During normal use gloves are not required. During manufacture and packing operations, the use of gloves with a breakthrough time >60 minutes is recommended. Refer to EN374 to select appropriate level of protection. Rubber and PVC gloves are recommended. NOTE:- Use of gloves is a good general hygiene practice.

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Note:- This would be very unusual in normal use.

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

The PPE indicated in this SDS is not a COSHH assessment. It represents the PPE that should be considered for the neat product at all stages of the products life cycle, including manufacture, packing, distribution, use and disposal. Use solutions are unclassified, but for these we recommend use of gloves as minimum PPE.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                |              |
|----------------|--------------|
| Physical state | : Solid      |
| Appearance     | : Powder.    |
| Colour         | : Blue.      |
| Odour          | : odourless. |

# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

|   |                                |
|---|--------------------------------|
| Odour threshold                                 | : No data available            |
| pH  | : 10.7 – 11.2 @1% wt/v         |
| Relative evaporation rate (butylacetate=1)      | : Not applicable.              |
| Relative evaporation rate (ether=1)             | : Not applicable               |
| Relative evaporation rate (water=1)             | : Not applicable               |
| Relative evaporation rate (ethanol=1)           | : Not applicable               |
| Melting point                                   | : Not applicable               |
| Freezing point                                  | : Not applicable               |
| Boiling point                                   | : Not applicable               |
| Flash point                                     | : Not applicable               |
| Auto-ignition temperature                       | : Not applicable               |
| Decomposition temperature                       | : Not applicable               |
| Flammability (solid, gas)                       | : Non flammable.               |
| Vapour pressure                                 | : Not applicable               |
| Relative vapour density at 20°C                 | : Not applicable               |
| Relative density                                | : Not applicable               |
| Relative gas density                            | : 0.45 – 0.55                  |
| Solubility                                      | : Completely soluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available            |
| Viscosity, kinematic                            | : Not applicable               |
| Viscosity, dynamic                              | : No data available            |
| Explosive properties                            | : Product is not explosive.    |
| Oxidising properties                            | : Not oxidising.               |
| Explosive limits                                | : Not applicable               |

### 9.2. Other information

|                         |                     |
|-------------------------|---------------------|
| Minimum ignition energy | : Not applicable    |
| Softening point         | : Not applicable    |
| VOC content             | : Contains no VOC's |
| Volatility              | : Non volatile      |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions of use. Do not mix with other chemicals.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Store away from moisture in a closed container. Protect from sunlight.

### 10.5. Incompatible materials

Strong acids. Oxidizing agent. Do not mix with Bleach or products containing Sodium Hypochlorite, this could result in dangerous heating of the solution.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

|                         |                  |
|-------------------------|------------------|
| Acute toxicity (oral)   | : Not classified |
| Acute toxicity (dermal) | : Not classified |

# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

Acute toxicity (inhalation) : Not classified

### Citric Acid (77-92-9)

|                |  |
|----------------|--|
| LD50 oral rat  | 3000 mg/kg Source: OECD Screening Information Data Set |
| ATE CLP (oral) | 3000 mg/kg bodyweight                                  |

### Sodium Metasilicate (6834-92-0)

|                       |  |
|-----------------------|--|
| LD50 oral rat         | 1153 mg/kg   |
| LD50 dermal rat       | > 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity) |
| LC50 Inhalation - Rat | > 2.06 mg/l air Animal: rat, Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)     |
| ATE CLP (oral)        | 1153 mg/kg bodyweight  |

### $\beta$ -Alanine, N-(2-carboxyethyl)-,N-coco alkyl derivs.,Disodium Salt (90170-43-7)

|               |              |
|---------------|--------------|
| LD50 oral rat | ≈ 2000 mg/kg |
|---------------|--------------|

### Alcohols C9-11, Ethoxylated (68439-46-3)

|                 |                      |
|-----------------|----------------------|
| LD50 oral rat   | 300 – 2000 ml/kg     |
| LD50 dermal rat | > 2000 ml/kg         |
| ATE CLP (oral)  | 500 mg/kg bodyweight |

### REACTION PRODUCT OF BENZENE SULPHONIC ACID, C10-C14 SEC ALKYL DERIVS and BENZENE SULPHONIC ACID 4 METHYL AND SODIUM HYDROXIDE

|                 |  |
|-----------------|--|
| LD50 oral rat   | ≥ 3346 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.1175 (Acute Oral Toxicity), 95% CL: 3196 - 3503            |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other: |

Skin corrosion/irritation : Causes severe skin burns.  
pH: 10.7 – 11.2 @1% wt/v

### Sodium Metasilicate (6834-92-0)

|    |      |
|----|------|
| pH | 12.6 |
|----|------|

Serious eye damage/irritation : Causes serious eye damage.  
pH: 10.7 – 11.2 @1% wt/v

### Sodium Metasilicate (6834-92-0)

|    |      |
|----|------|
| pH | 12.6 |
|----|------|

Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : This mixture is not classified as a carcinogen.  
Reproductive toxicity : This mixture has no reproductive/foetal harm classifications and is not expected to be a risk to expectant mothers.  
STOT-single exposure : Not classified

### Citric Acid (77-92-9)

|                      |                                   |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
|----------------------|-----------------------------------|

### Sodium Metasilicate (6834-92-0)

|                      |                                   |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
|----------------------|-----------------------------------|

STOT-repeated exposure : Not classified

### Sodium Metasilicate (6834-92-0)

|                            |   |
|----------------------------|---|
| NOAEL (oral, rat, 90 days) | 227 – 237 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
|----------------------------|---|

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Aspiration hazard : Not classified

| M-BLUE F&S Detergent  |                |
|---|----------------|
| Viscosity, kinematic  | Not applicable |
| sodium carbonate (497-19-8)   |                |
| Viscosity, kinematic  | Not applicable |
| REACTION PRODUCT OF BENZENE SULPHONIC ACID, C10-C14 SEC ALKYL DERIVS and BENZENE SULPHONIC ACID 4 METHYL AND SODIUM HYDROXIDE |                |
| Viscosity, kinematic  | Not applicable |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Normal use solutions of this product are not classified for environmental harm.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.  
Not rapidly degradable

| Citric Acid (77-92-9)   |   |
|---|---|
| LC50 - Fish [1]   | 48 mg/l Source: ECOTOX  |
| Sodium Metasilicate (6834-92-0)   |   |
| EC50 - Crustacea [1]  | 1700 mg/l Test organisms (species): Daphnia magna   |
| EC50 72h - Algae [1]  | 207 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)       |
| Alcohols C9-11, Ethoxylated (68439-46-3)  |   |
| LC50 - Fish [1]   | 1 – 10 mg/l   |
| EC50 - Crustacea [1]  | 1 – 10 g/l  |
| EC50 72h - Algae [1]  | 1 – 10 mg/l   |
| REACTION PRODUCT OF BENZENE SULPHONIC ACID, C10-C14 SEC ALKYL DERIVS and BENZENE SULPHONIC ACID 4 METHYL AND SODIUM HYDROXIDE |   |
| EC50 - Crustacea [1]  | 8.8 mg/l Test organisms (species): Daphnia magna  |
| EC50 72h - Algae [1]  | 25 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)        |
| EC50 72h - Algae [2]  | 72 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)        |
| NOEC (chronic)  | 1.18 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| NOEC chronic fish   | 0.23 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '72 d' |

### 12.2. Persistence and degradability

| M-BLUE F&S Detergent          |  |
|-------------------------------|--|
| Persistence and degradability | The Surfactants and Chelants used in this mixture are Biodegradable. |

# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

### 12.3. Bioaccumulative potential

#### M-BLUE F&S Detergent

|                           |                                |
|---------------------------|--------------------------------|
| Bioaccumulative potential | Not expected to Bioaccumulate. |
|---------------------------|--------------------------------|

#### Citric Acid (77-92-9)

|   |                   |
|---|-------------------|
| Partition coefficient n-octanol/water (Log Pow) | -1.7 Source: ICSC |
|---|-------------------|

#### Sodium Metasilicate (6834-92-0)

|   |       |
|---|-------|
| Partition coefficient n-octanol/water (Log Pow) | -5.65 |
|---|-------|

### 12.4. Mobility in soil

#### M-BLUE F&S Detergent

|                        |                  |
|------------------------|------------------|
| Additional information | soluble in water |
|------------------------|------------------|

### 12.5. Results of PBT and vPvB assessment

#### M-BLUE F&S Detergent

This product does not contain any substances classified as PBT

This product does not contain any substances classified as vPvB.

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Disposal of this product must comply with local and national environmental legislation.  
Sewage disposal recommendations : Small volumes of use solution can be disposed of to sewage drains.

## SECTION 14: Transport information






In accordance with ADR / IMDG / IATA / ADN / RID

| ADR  | IMDG  | IATA  | ADN   | RID   |
|--|---|---|---|---|
| <b>14.1. UN number</b>   |   |   |   |   |
| UN 1759  | UN 1759   | UN 1759   | UN 1759   | UN 1759   |
| <b>14.2. UN proper shipping name</b>   |   |   |   |   |
| CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated)                      | CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated)                 | Corrosive solid, n.o.s. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated)                 | CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated)                 | CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated)                 |
| <b>Transport document description</b>  |   |   |   |   |
| UN 1759 CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated), 8, III, (E) | UN 1759 CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated), 8, III | UN 1759 Corrosive solid, n.o.s. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated), 8, III | UN 1759 CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated), 8, III | UN 1759 CORROSIVE SOLID, N.O.S. (Contains Sodium Metasilicate, Alcohols C9-C11 Ethoxylated), 8, III |
| <b>14.3. Transport hazard class(es)</b>  |   |   |   |   |
| 8  | 8   | 8   | 8   | 8   |

# M-BLUE F&S Detergent


## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

| ADR   | IMDG  | IATA  | ADN   | RID   |
|---|---|---|---|---|
|  |  |  |  |  |
| <b>14.4. Packing group</b>  |   |   |   |   |
| III   | III   | III   | III   | III   |
| <b>14.5. Environmental hazards</b>  |   |   |   |   |
| Dangerous for the environment: No   | Dangerous for the environment: No<br>Marine pollutant: No                         | Dangerous for the environment: No   | Dangerous for the environment: No   | Dangerous for the environment: No   |
| <5kg Derogation applies   |   |   |   |   |

### 14.6. Special precautions for user

#### Overland transport

|   |   |
|---|---|
| Classification code (ADR)                                 | : C10   |
| Special provisions (ADR)                                  | : 274   |
| Limited quantities (ADR)                                  | : 5kg   |
| Excepted quantities (ADR)                                 | : E1  |
| Packing instructions (ADR)                                | : P002, IBC08, LP02, R001   |
| Special packing provisions (ADR)                          | : B3  |
| Mixed packing provisions (ADR)                            | : MP10  |
| Portable tank and bulk container instructions (ADR)       | : T1  |
| Portable tank and bulk container special provisions (ADR) | : TP33  |
| Tank code (ADR)   | : SGAV, L4BN  |
| Vehicle for tank carriage                                 | : AT  |
| Transport category (ADR)                                  | : 3   |
| Special provisions for carriage - Bulk (ADR)              | : VC1, VC2, AP7   |
| Hazard identification number (Kemler No.)                 | : 80  |
| Orange plates   | :  |
| Tunnel restriction code (ADR)                             | : E   |
| EAC code  | : 2X  |

#### Transport by sea

|                                    |  |
|------------------------------------|--|
| Special provisions (IMDG)          | : 223, 274   |
| Limited quantities (IMDG)          | : 5 kg   |
| Excepted quantities (IMDG)         | : E1   |
| Packing instructions (IMDG)        | : P002, LP02                                       |
| IBC packing instructions (IMDG)    | : IBC08  |
| IBC special provisions (IMDG)      | : B3   |
| Tank instructions (IMDG)           | : T1   |
| Tank special provisions (IMDG)     | : TP33   |
| EmS-No. (Fire)                     | : F-A  |
| EmS-No. (Spillage)                 | : S-B  |
| Stowage category (IMDG)            | : A  |
| Properties and observations (IMDG) | : Causes burns to skin, eyes and mucous membranes. |

#### Air transport

|  |        |
|--|--------|
| PCA Excepted quantities (IATA)               | : E1   |
| PCA Limited quantities (IATA)                | : Y845 |
| PCA limited quantity max net quantity (IATA) | : 5kg  |
| PCA packing instructions (IATA)              | : 860  |
| PCA max net quantity (IATA)                  | : 25kg |

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According to GB and EU REACH and CLP Regulations

|                                 |            |
|---------------------------------|------------|
| CAO packing instructions (IATA) | : 864      |
| CAO max net quantity (IATA)     | : 100kg    |
| Special provisions (IATA)       | : A3, A803 |
| ERG code (IATA)                 | : 8L       |

### Inland waterway transport

|                                   |          |
|-----------------------------------|----------|
| Classification code (ADN)         | : C10    |
| Special provisions (ADN)          | : 274    |
| Limited quantities (ADN)          | : 5 kg   |
| Excepted quantities (ADN)         | : E1     |
| Equipment required (ADN)          | : PP, EP |
| Number of blue cones/lights (ADN) | : 0      |

### Rail transport

|   |                           |
|---|---------------------------|
| Classification code (RID)                                 | : C10                     |
| Special provisions (RID)                                  | : 274                     |
| Limited quantities (RID)                                  | : 5kg                     |
| Excepted quantities (RID)                                 | : E1                      |
| Packing instructions (RID)                                | : P002, IBC08, LP02, R001 |
| Special packing provisions (RID)                          | : B3                      |
| Mixed packing provisions (RID)                            | : MP10                    |
| Portable tank and bulk container instructions (RID)       | : T1                      |
| Portable tank and bulk container special provisions (RID) | : TP33                    |
| Tank codes for RID tanks (RID)                            | : SGAV, L4BN              |
| Transport category (RID)                                  | : 3                       |
| Special provisions for carriage – Bulk (RID)              | : VC1, VC2, AP7           |
| Colis express (express parcels) (RID)                     | : CE11                    |
| Hazard identification number (RID)                        | : 80                      |

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### VOC Directive (2004/42)

VOC content : Contains no VOC's

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

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According to GB and EU REACH and CLP Regulations

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

GB REACH and CLP regulations.

UK HSE EH40 Publication.

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

### Indication of changes:

Inclusion of EU UFI code and additional comments in section 7.

### Abbreviations and acronyms:

|        |   |
|--------|---|
| 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             |
| ATE    | Acute Toxicity Estimate   |
| BCF    | Bioconcentration factor   |
| BLV    | Biological limit value  |
| BOD    | Biochemical oxygen demand (BOD)   |
| COD    | Chemical oxygen demand (COD)  |
| DMEL   | Derived Minimal Effect level  |
| DNEL   | Derived-No Effect Level   |
| EC-No. | European Community number   |
| EC50   | Median effective concentration  |
| EN     | European Standard   |
| IARC   | International Agency for Research on Cancer   |
| IATA   | International Air Transport Association   |
| IMDG   | International Maritime Dangerous Goods  |
| LC50   | Median lethal concentration   |
| LD50   | Median lethal dose  |
| LOAEL  | Lowest Observed Adverse Effect Level  |
| NOAEC  | No-Observed Adverse Effect Concentration  |
| NOAEL  | No-Observed Adverse Effect Level  |
| NOEC   | No-Observed Effect Concentration  |
| OECD   | Organisation for Economic Co-operation and Development  |
| OEL    | Occupational Exposure Limit   |
| PBT    | Persistent Bioaccumulative Toxic  |
| PNEC   | Predicted No-Effect Concentration   |
| RID    | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| SDS    | Safety Data Sheet   |
| STP    | Sewage treatment plant  |



# M-BLUE F&S Detergent

## Safety Data Sheet

According to GB and EU REACH and CLP Regulations

| Abbreviations and acronyms: |  |
|-----------------------------|--|
| ThOD                        | Theoretical oxygen demand (ThOD)         |
| TLM                         | Median Tolerance Limit                   |
| VOC                         | Volatile Organic Compounds               |
| CAS-No.                     | Chemical Abstract Service number         |
| N.O.S.                      | Not Otherwise Specified                  |
| vPvB                        | Very Persistent and Very Bioaccumulative |
| ED                          | Endocrine disrupting properties          |

| Full text of H- and EUH-statements: |  |
|-------------------------------------|--|
| Acute Tox. 4 (Oral)                 | Acute toxicity (oral), Category 4  |
| Aquatic Chronic 2                   | Hazardous to the aquatic environment – Chronic Hazard, Category 2                          |
| Aquatic Chronic 3                   | Hazardous to the aquatic environment – Chronic Hazard, Category 3                          |
| Eye Dam. 1                          | Serious eye damage/eye irritation, Category 1  |
| Eye Irrit. 2                        | Serious eye damage/eye irritation, Category 2  |
| H302                                | Harmful if swallowed.  |
| H314                                | Causes severe skin burns and eye damage.   |
| H315                                | Causes skin irritation.  |
| H318                                | Causes serious eye damage.   |
| H319                                | Causes serious eye irritation.   |
| H335                                | May cause respiratory irritation.  |
| H411                                | Toxic to aquatic life with long lasting effects.   |
| H412                                | Harmful to aquatic life with long lasting effects.   |
| Skin Corr. 1A                       | Skin corrosion/irritation, Category 1, Sub-Category 1A                                     |
| Skin Corr. 1B                       | Skin corrosion/irritation, Category 1, Sub-Category 1B                                     |
| Skin Irrit. 2                       | Skin corrosion/irritation, Category 2  |
| STOT SE 3                           | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.