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August 2009

**NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)**

# FULL PUBLIC REPORT

## Chemical in Maxhib OA-3090

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is administered by the Department of Health and Ageing, and conducts the risk assessment for public health and occupational health and safety. The assessment of environmental risk is conducted by the Department of the Environment, Water, Heritage and the Arts.

For the purposes of subsection 78(1) of the Act, this Full Public Report may be inspected at our NICNAS office by appointment only at 334-336 Illawarra Road, Marrickville NSW 2204.

This Full Public Report is also available for viewing and downloading from the NICNAS website or available on request, free of charge, by contacting NICNAS. For requests and enquiries please contact the NICNAS Administration Coordinator at:


| | |
|---|---|
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**Director**
**NICNAS**

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# Full Public Report

## Chemical in Maxhib OA-3090

### 1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)
Kidde Australia Pty Ltd (ABN 68 006 252 428)
314 Boundary Road
DINGLEY VIC 3172

NOTIFICATION CATEGORY
Limited-small volume: Chemical other than polymer (1 tonne or less per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)
Data items and details claimed exempt from publication:
Chemical name, Other names, CAS Number, Molecular Formula, Structural Formula, Molecular Weight, Spectral Data, Purity, Identity and % of Hazardous Impurities, Identity and % Weight of Non-Hazardous Impurities, Import Volume.

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)
Variation to the schedule of data requirements is claimed as follows:
Melting Point, Vapour Pressure, Water Solubility, Hydrolysis as a function of pH, Partition Coefficient, Adsorption/Desorption, Dissociation Constant, Flash Point, Flammability Limits, Auto-ignition Temperature, Explosive Properties.

### 2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
Maxhib OA-3090 (Product containing 45% notified chemical)

OTHER NAME(S)
Modified amine

MOLECULAR WEIGHT
< 500 Da.

ANALYTICAL DATA
Reference IR spectrum was provided.

### 3. COMPOSITION

DEGREE OF PURITY > 90%

### 4. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AT 20°C AND 101.3 kPa: Pale yellow liquid with mild amine odour (Maxhib OA-3090 containing 45% notified chemical)

| Property | Value | Data Source/Justification |
|---|---|---|
| Boiling Point | 130°C at 101.3 kPa | Measured |
| Density | 980 kg/m$^3$ at 25°C | Measured |
| Water Solubility | Soluble (> 450 g/L at 20°C) | MSDS |
| Hydrolysis as a Function of pH | Not determined | Expected to be stable, based on the structure. |
| Partition Coefficient (n-octanol/water) | Not determined. | Expected to be low, based on the water solubility. |

| | | |
|---|---|---|
| Adsorption/Desorption | Not determined. | Likely to be mobile in soils, based on the water solubility. |
| Dissociation Constant | pKa ~ 8.5 | Analogue data |
| pH* | 7.2 – 8.2 for a 1% solution | Estimated |
| Flash Point* | > 100°C | Measured |
| Flammability | Not expected to be flammable | Estimated |
| Autoignition Temperature | Not determined | Not expected to autoignite under normal conditions of use. |
| Explosive Properties | Not expected to be explosive | The structural formula contains no explosophores. |

* Data/Estimate on the product Maxhib OA-3090 containing the notified chemical at 45%.

DISCUSSION OF PROPERTIES
For full details of tests on physical and chemical properties, please refer to Appendix A.

*Reactivity*
Stable under normal environmental and usage conditions.

## 5. INTRODUCTION AND USE INFORMATION

MODE OF INTRODUCTION OF NOTIFIED CHEMICAL OVER NEXT 5 YEARS
The notified chemical will be imported at 45% in the product Maxhib OA-3090 by sea in 200 kg plastic drums for reformulation into fire fighting foams. Alternatively, it may be imported as a component of fire fighting concentrates at ≤ 0.45% by sea in 20 L, 200 L or 1000 L Intermediate Bulk Containers (IBCs) or as a component of a fire extinguisher formulation at ≤ 0.45% in an 800 mL cartridge contained within the fire extinguisher.

MAXIMUM INTRODUCTION VOLUME OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS

| *Year* | *1* | *2* | *3* | *4* | *5* |
|---|---|---|---|---|---|
| *Tonnes* | < 1 | < 1 | < 1 | < 1 | < 1 |

PORT OF ENTRY
Melbourne, VIC

IDENTITY OF RECIPIENTS
Kidde Australia Pty Ltd, Dingley VIC

TRANSPORTATION AND PACKAGING
The notified chemical will be imported at 45% in the product Maxhib OA-3090 by sea in 200 kg plastic drums for reformulation into fire fighting foams by Kidde Australia Pty Ltd. The finished fire fighting foam concentrates will be imported in 20 L, 200 L drums or 1000 L IBCs. If imported in a fire extinguisher the notified chemical will be packaged in an 800 mL cartridge contained within the extinguisher.

USE
The notified chemical will be used as an additive for improving foam stability in aqueous fire fighting foam concentrates for hydrocarbon fuels. Typical end-users will be fire brigades, industrial fire services and foam fire extinguisher manufacturers. Fire extinguishers will not be used in home or office environments.

OPERATION DESCRIPTION
*Formulation into fire fighting foam concentrate*
The aqueous solution containing the notified chemical (45%) will be first warmed and then pumped into a bulk mixing tank (~ 8000 L). Other components such as water, surfactants, and corrosion inhibitors will be added and mixed for approximately 1 hour. The notified chemical makes up approximately 0.45% of the final fire fighting foam concentrate.

Samples of the finished product will be tested by the Quality Assurance Laboratory before being filled using automated lines into packaging (20 L or 200 L drums, or 1000 L IBCs).

The final packaged product will be sold to fire brigades, industrial fire services organisations and foam fire

extinguisher manufacturers.

*End use by trained fire fighting personnel*
Fire brigade personnel and industrial fire service personnel are expected to store the containers of finished product until required for use. It is expected they will decant the required amount of concentrate into smaller containers for transport by service vehicles. During fire fighting, it is expected the notified chemical will be further diluted (to as low as 0.045%) in stream use. A hose and nozzle will be connected to the drum or container containing the reformulated fire fighting foam product and the product pumped through the hose and directed towards the fire via the nozzle.

Fire extinguishers are expected to be checked every 5 years. Service technicians will load the cartridge with foam concentrate and replace back in the extinguisher.

## 6. HUMAN HEALTH IMPLICATIONS

### 6.1 Exposure assessment

#### 6.1.1 Occupational exposure

NUMBER AND CATEGORY OF WORKERS

| *Category of Worker* | *Number* | *Exposure Duration (hours/day)* | *Exposure Frequency (days/year)* |
|---|---|---|---|
| Transport from dock to notifier's site for reformulation (unloading/loading trucks) | 1-2 | 1 | 5 |
| Handling and storage operators | 2 | 0.33 | 5 |
| Fire brigade fire fighters | > 5000 | ≤ 2 | < 20 |
| Industrial fire service personnel | > 500 | ≤ 2 | 50-100 |
| Foam fire extinguishing manufacturer personnel | 50-100 | ≤ 8 | 50-100 |

EXPOSURE DETAILS
*Transport and storage*
Transport and storage workers are not expected to be exposed to the notified chemical (45%) as they are handling closed containers. The product containing the notified chemical will be supplied in 200 kg drums and transported on pallets. Exposure is possible in the event of an accident where the packaging is breached.

*Formulation of foam fire fighting concentrate*
Dermal and ocular exposure may occur from spills when opening and closing drums, pumping the solution containing the notified chemical (45%) to the mixing vessel, and connecting and disconnecting transfer and filling lines. The batching and mixing areas where these activities will take place are expected to be equipped with local exhaust ventilation and opening doors to provide further ventilation. Inhalation exposure is not expected as any aerosols generated would be contained within the closed mixing vessel. EASE modelling of dermal exposure during reformulation processes involving the notified chemical estimate the level of exposure to be 0-0.045 mg/cm$^2$/day assuming a concentration of 45% and that there is direct handling, the contact level is incidental and the use is non-dispersive.

Dermal and ocular exposure to the foam fire fighting concentrate containing 0.45% of the notified chemical may also occur due to drips and spills during filling of product containers. Maintenance workers may also experience skin contamination during cleaning and maintenance of equipment.

Workers involved in the above formulation activities are expected to wear personal protective equipment (PPE) such as overalls, safety glasses, safety boots and gloves to minimise exposure.

*End Use*
Fire brigade personnel and industrial fire service personnel may be exposed to the notified chemical (approximately 0.45%) when transferring the fire fighting foam concentrate to smaller containers. Fire extinguisher service technicians may also be exposed to the notified chemical (approximately 0.45%) when filling the cartridge with fire fighting foam concentrate. Dermal contact is likely to be the main route of exposure. Dermal and inhalation exposure could occur to the notified chemical (0.045-0.45%) during the

application of the foam spray. Exposure may be prolonged depending on the end use circumstances. Fire personnel are expected to wear PPE such as protective clothing, safety glasses, safety boots and gloves when using the foam which will minimise exposure.

### 6.1.2. Public exposure

The formulated fire fighting foam containing the notified chemical is for industrial use only and the public are not expected to be exposed. The public could be exposed to very low levels of the notified chemical and/or breakdown products via environmental routes.

## 6.2. Human health effects assessment

No toxicity data on the notified chemical were submitted. However, information from the MSDS of the imported product Maxhib OA-3090 containing the notified chemical at 45% was provided by the notifier. Additionally, information on the parent acid and amine of the notified chemical was available.

***Toxicokinetics, metabolism and distribution***

The notified chemical is expected to be readily absorbed across biological membranes due to its low molecular weight, high water solubility, estimated low partition coefficient and estimated dissociation constant (~ 8.5). The anticipated irritant properties of the chemical may enhance dermal absorption. Absorption across the epithelium in the lungs would also be expected following inhalation of the notified chemical. Testing on the parent acid and amine demonstrate that they are readily absorbed by oral and dermal routes with the parent amine also demonstrating absorption following inhalation. Limited information available on a salt of the parent amine also indicates absorption after oral exposure.

***Acute toxicity***

The parent acids of the notified chemical were found to be of low acute toxicity in rats following oral, inhalation and dermal administration.

The parent amine is considered to be harmful following acute exposure via the oral ($LD_{50}$ = 900 mg/kg bw in guinea pigs and $LD_{50} \geq 1000$ mg/kg bw in rats), inhalation ($LC_{50} \geq 4.9$ mg/L in mice) and dermal ($LD_{50} \geq 500$ mg/kg bw) routes.

The notified chemical may therefore have some potential for toxicity upon acute oral, inhalation or dermal exposure.

***Irritation and Sensitisation***

The parent acid and amine of the notified chemical are either corrosive or irritating to the eye and skin in rabbits and humans. However a reduction in irritating effects was observed when the neutralised forms were tested.

No evidence of sensitisation has been found in tests in animals or humans up to 5% on either the parent acid or amine.

The imported product containing the notified chemical at 45% is also classified as an eye, respiratory system and skin irritant.

Based on this information, the notified chemical may be irritating to eyes and the skin. However, it is not predicted to be a skin sensitiser.

***Repeated Dose Toxicity***

Neither of the parent acids of the notified chemical were found to be systemically toxic following repeated oral exposure in rats.

In tests on the parent amine, systemic toxicity was observed at doses as low as 160 mg/kg bw/day with damage to the kidney, liver and stomach being the major effects. However when a salt of this amine was tested at concentrations up to 2.5% in drinking water the effects were greatly reduced, although effects such as reduced weight gain, urinalysis changes and swelling of the proximal tubules indicated possible malfunctioning of the kidney.

Based on this information the notified chemical may have the potential to cause systemic toxicity following repeated exposure.

***Mutagenicity and Genotoxicity***
No evidence of mutagenicity or genotoxicity was found in tests on the parent acids of the notified chemical.

Based on in vitro and in vivo studies, the parent amine does not appear to be an in vivo mutagen or genotoxin, although it has been shown to be easily nitrosated to form a carcinogenic nitrosamine.

Based on this information the notified chemical is unlikely to be a mutagen or genotoxin.

***Carcinogenicity***
One of the anionic components was found not to be carcinogenic in a long-term oral study in rats with doses up to 7400 mg/kg bw/day.

Long-term multi-generational oral exposure to rats with up to 1000 mg/kg bw/day of the cationic component showed little increase in the incidence of tumours in 104 test animals; 3 liver cell carcinomas, 2 malignant gliomas, 2 lung angiosarcomas plus one other tumour of the lung were observed. However, the incidence of tumours increased significantly when animals were treated concurrently with Sodium Nitrite or a nitrosated form of the cationic component.

The notified chemical is not considered to be a carcinogen based on long-term studies on its components.

***Health hazard classification***
The notified chemical is not able to be classified as hazardous under the *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 2004). However, based on the reported irritation effects of components of the notified chemical and the classification of the product (containing the notified chemical at 45%) as irritating to the eyes, respiratory system and skin (R36/37/38), the notified chemical should be considered as if it is classified as R36/37/38: irritating to eyes, respiratory system and skin.

### 6.3. Human health risk characterisation

#### 6.3.1. Occupational health and safety
*Reformulation of foam fire fighting concentrate*
Workers handling the imported product containing the notified chemical (≤ 45%) will have the greatest potential for exposure. The main health risks are caused by the irritant properties of the notified chemical. Workers are expected to experience dermal and ocular exposure during handling of the imported product, connection and disconnection of hoses and transfer to mixing vessels and filling lines. While there is a risk of skin and eye irritation resulting from these exposures, contact with the notified chemical is expected to be minimised by the use of PPE including safety glasses, gloves, overalls and boots.

Exposure to the notified chemical (≤ 0.45%) via the dermal and ocular routes may also occur during quality assurance testing, filling of packaging and cleaning of equipment. However, the risk of irritation is considered to be significantly less given the low concentration of the notified chemical and the use of PPE.

EASE modelling estimates that workers may encounter dermal exposure of 0-0.045 mg/cm$^2$/day. Assuming that 420 cm$^2$ is exposed (half of one hand), a bodyweight of 70 kg and that the dermal absorption is 100%, then a conservative estimate for the maximum daily exposure through the dermal route is up to 0.27 mg/kg bw/day. Although the systemic toxicity of the notified chemical is unknown the risk to formulation workers is not considered to be unacceptable due to the low levels of exposure and the use of PPE predicted.

*End use by trained fire fighting personnel*
Dermal, ocular and inhalation exposure to the notified chemical (≤ 0.45%) may occur when transferring the fire fighting foam concentrate to smaller containers, decanting into tanks for dilution and when replacing damaged fire extinguisher cartridges containing the concentrate. PPE may not be used in each of these circumstances, however, the risk of irritation without the use of PPE is not considered unacceptable given the low concentration the workers will be exposed to.

Overall, under the proposed conditions the level of risk to occupational health and safety is not considered unacceptable.

#### 6.3.2. Public health

The public is not expected to be exposed to the notified chemical during normal use. Any incidental exposure resulting from environmental routes is expected to be very low and therefore not considered to pose an unacceptable risk.

## 7. ENVIRONMENTAL IMPLICATIONS

### 7.1. Environmental Exposure & Fate Assessment

#### 7.1.1 Environmental Exposure

RELEASE OF CHEMICAL AT SITE

Reformulation of the notified chemical will occur at one site in Victoria. It is estimated that a maximum of 1% of the imported product will remain in the import drums (corresponding to less than 10 kg of the notified chemical per annum). This residue will be disposed of by a waste disposal contractor. Residues of the formulation equipment will be used in the following batch wherever possible. If the mixing tank is cleaned at the end of an extended batch run of different products, the amount of notified chemical to be disposed via waste disposal contractor is expected to be less than 1 kg per batch run.

RELEASE OF CHEMICAL FROM USE

The greatest potential for release of the notified chemical will be through the use in fire fighting foams. Such fires would include those in flammable liquid stores, vehicle accidents involving flammable liquid tankers or water insoluble products of a flammable or combustible nature. The finished foam concentrate will typically contain approx. 0.45% of the notified chemical. The action of the foam based concentrate combined with water spray is to smother the fire – this level of notified chemical delivered could be as low as 0.045%. In cases where flammable liquid storage areas have foam fire fighting facilities containing the notified chemical, it is expected these areas will have fire water containment such as bunding, sumps and onsite water treatment plants. The fire water would only be released to the sewer with prior consent from the local water authority. If consent is not granted, the waste is expected to be disposed of at a liquid waste facility.

The fate of the chemical in fighting “real” fires (such as a tanker accident) is problematic, as it will depend on the size of the fire and the amount of water and foam needed to control the fire. It is likely that it could enter local waterways via storm water drains, road surfaces and overland surface flow unless bunding of the accident scene occurred.

RELEASE OF CHEMICAL FROM DISPOSAL

The empty containers will be collected by a licensed waste contractor and cleaned out for re-use or disposal to secure landfill.

#### 7.1.2 Environmental fate

The notified chemical is expected to partition to soils and water, based on its use pattern and water solubility. No environmental fate data were submitted. The amine that is modified to form the notified chemical is known to be stable to hydrolysis and resistant to biodegradation by unadapted inocula. Biodegradation is expected to be the main removal process for the notified chemical in the environment, but there is likely to be an initial lag phase before degradation commences, given the need for adapted microbial populations. Sewage treatment can be expected to be effective in removing the notified chemical. However, shock loading with high concentrations (> 35 mg/L) can result in high concentrations of the undegraded amine in the effluent.

The notified chemical is not expected to bioconcentrate in fish as it is water soluble.

#### 7.1.3 Predicted Environmental Concentration (PEC)

The amount of the notified chemical released to the environment from a single fire incident will depend on the size of the fire. A large (10000 square foot) hydrocarbon fire may require 15000 gallons of fire fighting foam solution, based on guidance material issued by the notifier's client (http://www.kidde-fire.com/utcfs/ws-465/Assets/Foam%20Fire%20Fighting%20Guide.pdf accessed 10 June 2009). This could equate to 5000 gallons (20000 L) of foam concentrate, or 90 kg of the notified chemical.

A realistic, worst case situation would be an accident involving a fuel tanker, with run-off from the accident entering a lentic (still) body of water with significant wild-life. PECs can be calculated based on dilution in receiving waters, such as a small sewage treatment plant (5 ML daily flow), a larger sewage treatment plant (daily flow 50 ML) and a shallow (15 cm) pond covering 1 ha (volume 1.5 ML). The PECs are 18 mg/L for the small sewage treatment plant, 1.8 mg/L for the larger sewage treatment plant, and 60 mg/L for the shallow pond.

### 7.2. Environmental effects assessment

No ecotoxicity data were submitted.

#### 7.2.1 Predicted No-Effect Concentration

The PNEC cannot be calculated as no aquatic toxicity data are available.

### 7.3. Environmental risk assessment

On the basis of the predicted environmental concentrations, the notified chemical may pose a risk to sewage treatment plants and the environment when it is used to fight fires. One important assumption is that all of the chemical applied to the fire would be associated with run-off from the accident site. The run-off may not all flow into the pond, with some of the run-off retained by road surfaces and soil surrounding the accident site. Where possible, standard operating procedures of Australian fire brigades should operate to minimise run-off by containment and removal. Also, some losses might be expected through adsorption to sediment and particulate matter because of the surface activity.

Another assumption is that there would be uniform and complete mixing of the chemical in the receiving surface water. This may not occur, and could lead to localised areas (e.g. entry point of the run-off) where the concentration of the chemical would be elevated. This could have localised impacts on invertebrate and algal species, but the effect on fish might be limited as they have greater ability to avoid contamination. Additionally, the situations in which release to surface waters might occur are likely to be rare. Several factors would have to be met for the chemical to have a major environmental impact. These are:

1.) A major accident involving a flammable liquid tanker in which the load would catch alight;
2.) The run-off from the fire-fighting escaping to a lentic surface water; and
3.) The concentration of the notified chemical remaining near those affecting aquatic organisms for a few days.

As none of these potentially mitigated circumstances can be quantified, for example there are no environmental fate data, it is not possible to estimate a refined PEC.

Release of the notified chemical to sewer or surface waters would be a rare event, as in most cases the relevant authorities would erect bunding to prevent direct releases of fire fighting foams. Any impacts would be short term and localised, as the notified chemical is expected to be biodegradable.

## 8. CONCLUSIONS AND REGULATORY OBLIGATIONS

**Hazard classification**

Based on the available data the notified chemical should be considered as if it is classified as hazardous under the *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(2004)] with the following risk phrases: R36/37/38 Irritating to eyes, respiratory system and skin.

**Human health risk assessment**

Under the conditions of the occupational settings described, the notified chemical is not considered to pose an unacceptable risk to the health of workers.

When used in the proposed manner, the notified chemical is not considered to pose an unacceptable risk to public health.

**Environmental risk assessment**
On the basis of the PEC and the notified use pattern, the notified chemical may pose a risk to the environment. However, any harmful impacts would be infrequent, short term and localised, as the notified chemical will only be used in emergency situations to fight fires, and bunding will generally be erected to limit aquatic release.

**Recommendations**

CONTROL MEASURES
Occupational Health and Safety

- Employers should implement the following safe work practices to minimise occupational exposure during handling of the notified chemical as introduced:
  - Avoid contact with skin and eyes

- Employers should ensure that the following personal protective equipment is used by workers to minimise occupational exposure to the notified chemical as introduced:
  - Use protective gloves, eyewear and respirator to protect against inhalation of aerosols and vapours.

  Guidance in selection of personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

- A copy of the MSDS should be easily accessible to employees.

- If products and mixtures containing the notified chemical are classified as hazardous to health in accordance with the *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(2004)] workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must be in operation.

Disposal

- The notified chemical should be disposed of at a liquid waste facility.

Emergency procedures

- Spills or accidental release of the notified chemical should be handled by containment, collection and subsequent safe disposal.

**Regulatory Obligations**

*Secondary Notification*
This risk assessment is based on the information available at the time of notification. The Director may call for the reassessment of the chemical under secondary notification provisions based on changes in certain circumstances. Under Section 64 of the *Industrial Chemicals (Notification and Assessment) Act (1989)* the notifier, as well as any other importer or manufacturer of the notified chemical, have post-assessment regulatory obligations to notify NICNAS when any of these circumstances change. These obligations apply even when the notified chemical is listed on the Australian Inventory of Chemical Substances (AICS).

Therefore, the Director of NICNAS must be notified in writing within 28 days by the notifier, other importer or manufacturer:

(1) Under Section 64(1) of the Act; if
  - the importation volume exceeds one tonne per annum notified chemical;

or

(2) Under Section 64(2) of the Act; if

- the function or use of the chemical has changed from component of fire fighting foam concentrate, or is likely to change significantly;
- the chemical has begun to be manufactured in Australia;
- additional information has become available to the person as to an adverse effect of the chemical on occupational health and safety, public health, or the environment.

*Material Safety Data Sheet*

The MSDS of a product containing the notified chemical provided by the notifier was reviewed by NICNAS. The accuracy of the information on the MSDS remains the responsibility of the applicant.

## APPENDIX A: PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point** 130°C at 101.3 kPa

Remarks In-house test method (BLP-001) in which the test substance was placed into a glass test tube and an inverted closed end capillary tube inserted into the test substance. The test tube was placed in a beaker half-filled with mineral oil and heated on a hot plate until a steady stream of bubbles started appearing from the open end of the inverted capillary tube. The beaker was then allowed to cool. The boiling point temperature was recorded when the last bubble emerged from the capillary tube.

Test Facility PCC Chemax, Inc. (2006)

**Specific Gravity** 980 kg/$m^3$ at 25°C

Remarks Test report not provided.

**Flash Point** > 100°C

Method Pensky-Martens Closed Cup Method

Remarks Test conducted on the product Maxhib OA-3090 containing the notified chemical at 45%. Test report not provided.

**pH** 7.2-8.2

Remarks Test conducted on the product Maxhib OA-3090 (containing the notified chemical at 45%) diluted to 1%. Test report not provided.

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