

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)
Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556
CD 2005/1 Page 1 of 8

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

SYNONYMS

stabilised alkaline engine cooling
system cleaner concentrate

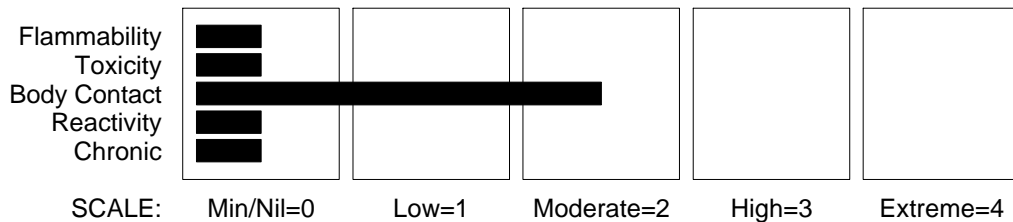
PRODUCT USE

Heavy duty alkaline cleaner.

SUPPLIER

Company: Fleetguard
Address:
31 Garden Street
Kilsyth
VIC, 3137
AUS
Telephone: (+61 3) 9721 9100
Emergency Tel: 1800 039 008 (24 hours)
Emergency Tel: +61 3 9573 3112
Fax: 03 9721 9148

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

According to the Criteria of NOHSC, and the ADG Code.



POISONS SCHEDULE

None

RISK

Irritating to eyes and skin.

SAFETY

Avoid contact with skin.
Wear eye/face protection.
In case of contact with eyes, rinse with plenty of water and contact Doctor or
Poisons Information Centre.

continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 2 of 8

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
potassium hydroxide	1310-58-3	<1
additives, non hazardous		N/S
water	7732-18-5	>60

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- foam
- dry chemical powder
- carbon dioxide

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 3 of 8

Section 5 - FIRE FIGHTING MEASURES

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered to be a significant fire risk.
- Expansion or decomposition on heating may lead to violent rupture of containers.
- Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.

Decomposition may produce toxic fumes of carbon dioxide (CO₂)
nitrogen oxides (NO_x)
other pyrolysis products typical of burning organic material
May emit corrosive fumes.

FIRE INCOMPATIBILITY

None known.

HAZCHEM

None

Personal Protective Equipment

PERSONAL PROTECTION EQUIPMENT

Gloves, boots (chemical resistant)

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.

continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 4 of 8

Section 7 - HANDLING AND STORAGE

- Avoid contact with incompatible materials.
 - When handling, DO NOT eat, drink or smoke.
 - Keep containers securely sealed when not in use.
 - Avoid physical damage to containers.
 - Always wash hands with soap and water after handling.
 - Work clothes should be laundered separately. Launder contaminated clothing before re-use.
 - Use good occupational work practice.
 - Observe manufacturer's storing and handling recommendations.
 - Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- DO NOT allow clothing wet with material to stay in contact with skin

SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

None known

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³
Australian Exposure Standards	Potassium hydroxide						2

No data available for water as (CAS: 7732-18-5)
Not available. Refer to individual constituents.

INGREDIENT DATA

POTASSIUM HYDROXIDE:

TLV C: 2 mg/m³ [ACGIH]

TLV C: 2 mg/m³

ES Peak: 2 mg/m³

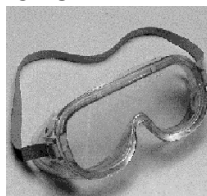
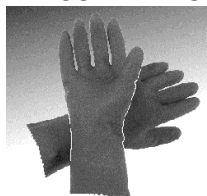
OES STEL: 2 mg/m³

The TLV-TWA is protective against respiratory tract irritation produced at higher concentrations.

WATER:

No exposure limits set by NOHSC or ACGIH

PERSONAL PROTECTION



continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 5 of 8

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them. DO NOT wear contact lenses.

HANDS/FEET

Wear chemical protective gloves, eg. PVC.

Wear safety footwear or safety gumboots, eg. Rubber

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer-generated selection:

Substance

water	
potassium hydroxide	
BUTYL	A
NEOPRENE	A
NATURAL RUBBER	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low	0.5-1 m/s (100-200 f/min.)

continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 6 of 8

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

velocity into zone of active generation)	
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Clear alkaline liquid; mixes with water.

PHYSICAL PROPERTIES

Liquid.

Mixes with water.

Molecular Weight: Not Applicable
Melting Range (°C): Not Available
Solubility in water (g/L): Miscible
pH (1% solution): Not Available
Volatile Component (%vol): Not Available
Relative Vapour Density (air=1): >1
Lower Explosive Limit (%): Not Applicable
Autoignition Temp (°C): Not Applicable
State: Liquid

Boiling Range (°C): 100
Specific Gravity (water=1): 1.08-1.12
pH (as supplied): 11.1 approx.
Vapour Pressure (kPa): 101.33 @ 100 deg C
Evaporation Rate: Not Available
Flash Point (°C): Not Applicable
Upper Explosive Limit (%): Not Applicable
Decomposition Temp (°C): Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 7 of 8

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

(No Oral LD50, any animal species) The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (eg. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

EYE

This material can cause eye irritation and damage in some persons.

SKIN

This material can cause inflammation of the skin on contact in some persons.
The material may accentuate any pre-existing dermatitis condition

INHALED

Not normally a hazard due to non-volatile nature of product
The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).
Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS

Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Fleetguard Restore Alkaline Cleaner - Heavy Duty

Not available. Refer to individual constituents.
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

POTASSIUM HYDROXIDE:

TOXICITY

Oral (rat) LD50: 273 mg/kg

IRRITATION

Skin (human): 50 mg/24h SEVERE

Skin (rabbit): 50 mg/24h SEVERE

Eye(rabbit):1mg/24h rinse-moderate

WATER:

No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

POTASSIUM HYDROXIDE:

Hazardous Air Pollutant: No

WATER:

continued...

FLEETGUARD RESTORE ALKALINE CLEANER - HEAVY DUTY

ChemWatch Material Safety Data Sheet (REVIEW)

Issue Date: Mon 6-Dec-2004

CHEMWATCH 18556

CD 2005/1 Page 8 of 8

Section 12 - ECOLOGICAL INFORMATION

No data for water.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible.
 - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 - Dispose of by: Burial in a licenced land-fill or Incineration in a licenced apparatus (after admixture with suitable combustible material)
 - Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
-

Section 14 - TRANSPORTATION INFORMATION

Shipping Name:
None
Dangerous Goods Class: None
UN/NA Number: None
ADR Number: None
Packing Group: None
Labels Required:
Additional Shipping Information:
International Transport Regulations:
IMO: None

HAZCHEM

None

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

potassium hydroxide (CAS: 1310-58-3) is found on the following regulatory lists:
Australian Inventory of Chemical Substances (AICS)
Australian Poisons Schedule

water (CAS: 7732-18-5) is found on the following regulatory lists:
Australian Inventory of Chemical Substances (AICS)

Section 16 - OTHER INFORMATION

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: Mon 6-Dec-2004

Print Date: Wed 23-Mar-2005