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PROFESSIONAL SUMMIT

# Safety Data Sheet
# *FG PLD III*

## 1. IDENTIFICATION

| | |
|---|---|
| **Synonyms** | **none** |
| **CAS#** | **see Part 3, below** |
| **Material Use** | **laundry powder for food processing facilities** |

***IN AN EMERGENCY CALL: INFOTRAC 1-800-535-5053***

## 2. HAZARD IDENTIFICATION

| | | | | |
|---|---|---|---|---|
| **GHS Class** | ***acute oral*** | ***skin corrosive*** | ***STOT*** | ***aquatic, chronic*** |
| **(Category)** | ***(4)*** | ***(1)*** | ***(3)*** | ***(4)*** |
| **Signal Words** | ***WARNING*** | ***DANGER*** | ***WARNING*** | ***no Signal Word*** |
| **Hazard Statements** | *harmful if swallowed (H302)* | *causes severe skin burns & eye damage (H314)* | *may cause respiratory tract irritation (H335)* | ***no Pictogram*** *may cause long-lasting harmful effects to aquatic life (H413)* |

**GHS Precautionary Statements for Labeling**

| | |
|---|---|
| **P262** | **Do not get in eyes, on skin or on clothing.** |
| **P264** | **Wash thoroughly after handling.** |
| **P270** | **Do not eat, drink or smoke when using this product.** |
| **P280** | **Wear protective gloves of rubber or nitrile.** |
| **P273** | **Avoid release to the environment.** |
| **P391** | **Collect spillage.** |
| **P313 & P333** | **If skin irritation or rash occurs, get medical advice/attention.** |
| **P305, P351, P338** | **If in eyes, rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.** |

## 3. COMPOSITION

| | CAS NUMBER | % | TLV ppm / mg/m$^3$ | $LD_{50}$ (*mg/kg*) ORAL | $LD_{50}$ (mg/kg) SKIN | $LC_{50}$ ppm INHALATION |
|---|---|---|---|---|---|---|
| Sodium Metasilicate (*pentahydrate*) | 6834-92-0 | 40-60% | not listed | 850 | not known | not known |
| Sodium Tripolyphosphate | 7758-29-4 | 20-30% | not listed | 3100 | >4640 | not known |
| Sodium Carbonate | 497-19-8 | 10-20% | not listed | 4090 | >2000 | not known |
| Sodium Hydroxide | 1310-73-2 | 5-10% | 2 | over 500 | not known | not known |
| Sodium Alkylbenzene Sulfonic Acid | 68081-81-2 | 1-5% | not listed | >1080 | >2000 | 310mg/m$^3$ |
| Nonionic Surfactant (NP-9) | on request | 1-5% | not listed | >2000 | not known | not known |

***NOTE:*** *Two other, non-toxic, components are present at 0.2% or less.*



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## 4. FIRST AID

SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if irritation occurs.

INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

*NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.*

## 5. FLAMMABILITY & FIRE-FIGHTING

| | |
|---|---|
| Flash Point | cannot burn |
| Autoignition Temperature | cannot burn |
| Flammable Limits | cannot burn |
| Combustion Products | oxides of carbon, sulphur and nitrogen |
| Firefighting Precautions | as for materials sustaining fire; firefighters must wear SCBA |
| Static Discharge | cannot accumulate a static charge |

## 6. ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| Leak Precaution | not applicable – *solid material* |
| Handling Spill | sweep, shovel & store in closed containers for disposal |

## 7. HANDLING & STORAGE

Keep dry. Never cut, drill, weld or grind on or near this container, whether empty or full. Avoid generating or breathing product dust. If dust forms in use, install adequate ventilation to clear workplace air. Strongly alkaline material; may cause skin burns if contact with moist skin occurs. Avoid all contact with skin & wash work clothes frequently. If dust formation is possible, wear appropriate resistant clothing to prevent skin contact. An eye bath & safety shower must be available near the workplace.

## 8. EXPOSURE CONTROL & PERSONAL PROTECTION

***Sodium Hydroxide:***

| | | | |
|---|---|---|---|
| ACGIH TLV | $2mg/m^3$ | ACGIH STEL | not listed |
| OSHA PEL | $2mg/m^3$ | OSHA STEL | not listed |
| Ventilation | no special mechanical ventilation required; if dust formation is possible install appropriate exhaust ventilation to control dust; if dusting is likely to be of short duration, wear a respiratory with a dust filter | | |
| Hands | wear rubber or nitrile gloves – *other types also protect; always confirm suitability with supplier* | | |
| Eyes | safety glasses with side shields or chemical goggles – *always protect eyes!* | | |
| Clothing | if dust formation is possible wear long-sleeved overalls with elastic wrist bands and ankle bands to prevent dust entry; wear a hat and face shield; take precautions to avoid skin contact | | |

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Odor & Appearance | white, odorless powder |
| Vapor Pressure | not known – *ingredients do not form a vapor* |
| Evaporation Rate (*Butyl Acetate = 1*) | not known – *no volatile ingredients* |
| Vapor Density (air = 1) | not known – *ingredients do not form a vapor* |
| Boiling Point | not known – *ingredients decompose without boiling* |
| Melting Point | not known |
| Density | approx.. 2.6; *Bulk Density may be considerably lower due to air entrainment* |
| Water Solubility | not known – *highly soluble* |
| Viscosity | not applicable – *solid material* |
| pH | >14 – *strongly alkaline* |

## 10. REACTIVITY

| | |
|---|---|
| Dangerously Reactive With | strong acids |
| Also Reactive With | not known |
| Chemical Stability | stable; will not polymerize |
| Decomposes in Presence of | no decomposition trigger known |
| Decomposition Products | none apart from Hazardous Combustion Products |
| Mechanical Impact | not sensitive |

## 11. TOXICITY INFORMATION

### i. *ACUTE EXPOSURE*

| | |
|---|---|
| Skin Contact | corrosive if skin is moist; product may collect moisture from air to become corrosive if not removed |
| Skin Absorption | slight; toxic effects unlikely by this route |
| Eye Contact | corrosive to eyes; permanent damage likely |
| Inhalation | product dust is likely to irritate respiratory system causing wheezing & coughing |
| Ingestion | corrosive to mouth, throat & stomach – *ingestion is not a route of industrial exposure* |

### ii. *CHRONIC EXPOSURE*

| | |
|---|---|
| General | prolonged or repeated contact with dust may cause dermatitis by removing protective skin oils |
| Sensitizing | not a sensitizer |
| Carcinogen/Tumorigen | not known to be a tumorigen in humans or animals |
| Reproductive Effect | no known effect on humans or animals |
| Mutagen | not known to be a mutagen or teratogen in humans or animals |
| Synergistic With | not known |
| Calculated $LD_{50}$ (oral) | 1140mg/kg (rat) |
| Calculated $LD_{50}$ (skin) | 6130 – *insufficient data for confidence* |
| $LC_{50}$ (inhalation) | *insufficient data to calculate* |

## 12. ECOLOGICAL INFORMATION

***Sodium Metasilicate pentahydrate:***

| | |
|---|---|
| Bioaccumulation | not a bioaccumulator |
| Biodegradation | inorganic product – does not biodegrade |
| Abiotic Degradation | dilutes readily in the environment; combines with metal ions to form insoluble calcium, aluminum, magnesium & iron silicates similar to naturally occurring silicates |
| Mobility in soil, water | water soluble; moves readily in soil and water |
| **Aquatic Toxicity** | |
| $LC_{50}$ (Fish, 96hr) | 365mg/liter (Brachydanio rerio), 4037mg/liter (Gambusia affinis) |
| $EC_{50}$ (Crustacea, 96hr) | 376mg/liter (Daphnia magna), 1100mg/liter (Lymnia sp.), 278mg/liter (Hyallela sp.) |
| $EC_{50}$ (Algae) | no data |
| $EC_0$ (Bacteria) | >1740mg/liter (Pseudomonas putida) – *this is an $LC_0$ – no inhibition at this dose* |

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## 12. ECOLOGICAL INFORMATION, cont'd

***Sodium Tripolyphosphate:***

| | |
|---|---|
| Bioaccumulation | cannot bioaccumulate |
| Biodegradation | cannot biodegrade; plants use phosphate as a fertilizer, removing it from the environment |
| Abiotic Degradation | gradual (faster in acidic medium) hydrolysis to orthophosphate (coupled to various metallic ions) |
| Mobility in soil, water | water soluble & may move readily through soil & the water column; *the phosphate ion precipitates in the presence of calcium or magnesium ions, so may not move far* |
| **Aquatic Toxicity** | |
| $LC_{50}$ (Fish, 48hr) | 1600mg/liter (Leuciscus idus) |
| $EC_{50}$ (Crustacea, 50hr) | 1089mg/liter (Daphnia magna) |
| $EC_{50}$ (Algae) | not toxic to aquatic life – *promotes algal blooms on surface water, eventually causing eutrophication* |
| $EC_{50}$ (Bacteria) | 1000mg/liter (*activated sludge, domestic*) |

***Sodium Carbonate:***

| | |
|---|---|
| Bioaccumulation | not a bioaccumulator |
| Biodegradation | inorganic material, cannot biodegrade |
| Abiotic Degradation | reacts with atmospheric $CO_2$ neutralizing gradually to sodium bicarbonate |
| Mobility in soil, water | water soluble; moves readily in soil and water |
| **Aquatic Toxicity** | |
| $LC_{50}$ (Fish, 96hr) | 740mg/liter (Gambusia affinis), 300 & 320mg/liter (Lepomis macrochirus) |
| $EC_{50}$ (Crustacea, 24hr) | 265 & 565mg/liter (Daphnia magna), 600mg/liter (Culex sp.) |
| $EC_{50}$ (Algae) | 137, 242 & 1050mg/liter (Nitzschia sp.) |
| $EC_{50}$ (Bacteria) | not known – *no data* |

***Sodium Hydroxide:***

| | |
|---|---|
| Bioaccumulation | not a bioaccumulator |
| Biodegradation | inorganic product – cannot biodegrade |
| Abiotic Degradation | dilutes readily in surface water, neutralizing with dissolved $CO_2$ to sodium carbonate; if calcium or magnesium ions are present, insoluble & immobile carbonates precipitate. |
| Mobility in soil, water | water soluble; moves readily in soil and water, *but see above* |
| **Aquatic Toxicity** | |
| $LC_{50}$ (Fish 96 hr) | 125mg/liter (Gambusia affinis), 45mg/liter (Oncorhynchus mykiss) – *lethal due to alkalinity* |
| $LC_{100}$ (Crustacea, 48hr) | 100-150mg/liter (Daphnia magna); 125-1000mg/liter (freshwater insect larvae) |
| $EC_{50}$ (Algae) | *no information* |
| $EC_{50}$ (Bacteria) | *no information* |

***NOTE:*** *Lethal pH for freshwater fish is pH= 9. At this pH damage occurs to their mucus coating & their gills.*

***Sodium Alkylbenzene Sulfonic Acid:***

| | |
|---|---|
| Bioaccumulation | does not bioaccumulate[1] |
| Biodegradation | readily biodegradable; 69% to 90% in 28 days (*various linear benzene sulfonates tested*)[1] |
| Abiotic Degradation | not known |
| Mobility in soil, water | water soluble; moves readily in soil and the water column |
| **Aquatic Toxicity** | |
| $LC_{50}$ (Fish, 96 hr) | 2.9-13mg/liter (*various species*)[1] |
| $EC_{50}$ (Crustacea, 48 hr) | 1.62mg/liter (Daphnia magna)[1] |
| $EC_{50}$ (Algae, 72 hr) | 29mg/liter (Selenastrum capricornutum)[1] |

***Nonionic Surfactant:***

| | |
|---|---|
| Bioaccumulation | surfactant does not bioaccumulate; ***breakdown product, unethoxylated nonylphenol may bioaccumulate*** |
| Biodegradation | biodegrades in the presence of oxygen; 34% biodegradation in 20 days yielding di- and mono-ethoxylate; *however, these latter compounds resist further biodegradation (below)* |
| Abiotic Degradation | not known |
| Mobility in soil, water | sufficiently water soluble to move readily through soil and the water column |
| **Aquatic Toxicity** | |
| $LC_{50}$ (Fish, 96 hr) | 2.1-2.6mg/liter (Pimephelas promelas), 13.9-19.5mg/liter (Poecilia reticulata – 48hr) |
| $LC_{50}$ (Crustacea, 48hr) | 3.8-6.2 & 18.2mg/liter (Daphnia magna), 20.9mg/liter (Gammarus pulex) |
| $EC_{50}$ (Algae, 96hr) | 15mg/liter (Lemna minor), 7mg/liter (Scenedesmus quadricauda) |

***NOTE:*** ***The Nonylphenol Ethoxylates biodegrade to estrogenic hormone mimics & may lead to reproductive failure in shore birds, amphibia & fish.***

## 13. DISPOSAL CONSIDERATIONS

Waste Disposal **do not flush to sewer undiluted**; incinerate in approved facility with flue gas monitoring & scrubbing, mix with a suitable flammable waste before incineration

Containers **Drums** should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.
**Pails** must be vented and thoroughly dried prior to crushing and recycling.
**IBCs** (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years.
***Warning: never cut, drill, weld or grind on or near this container, even if empty.***

## 14. TRANSPORT INFORMATION

***USA 49 CFR & Canada/International TDG***

| | |
|---|---|
| Product Identification Number | **UN – 3262** |
| Shipping Name | **Corrosive solid, basic, inorganic, N.O.S. (sodium hydroxide)** |
| Classification | **Class 8; Packing Group III** |
| ***Marine Pollution*** | ***not a marine pollutant*** |
| ***ERAP Required*** | ***No*** |


## 15. REGULATIONS

| | |
|---|---|
| **Canada DSL** | **on inventory** |
| **U.S.A. TSCA** | **on inventory** |
| **Europe EINECS** | **on inventory** |

## 16. OTHER INFORMATION

**Date of Preparation** **May 2015**
**Date of Revision** **-**
Prepared for Tomco-Harwel, by **Peter Bursztyn**
*With data from the Registry of Toxic Effects of Chemical Substances (RTECS), Hazardous Substance Data Base (HSDB), Cheminfo (CCOHS), OSHA, IUCLID Datasheets (European Chemical Substance Information System - ESIS), & others sources (below if used), as required/available*

***(1) OECD SIDS Initial Assessment Report on "Linear Alkylbenzene Sulfonates", Paris, April 2005:***
http://webnet.oecd.org/hpv/ui/handler.axd?id=5b837fb0-350c-4742-914e-5f6513df120a

***last page of SDS***

***PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.***

***EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053***