Safety Data Sheet

SECTION 1: Identification

1.1 Product identifier
   Product name
   Formula FS-40
   Product number
   942
   Brand
   Crown Chemical, Inc.

1.2 Other means of identification
   Formula FS-40

1.3 Recommended use of the chemical and restrictions on use
   Food plant cleaning

1.4 Supplier's details
   Name
   Crown Chemical, Inc.
   Address
   4701 W. 136th. St.
   Crestwood, Illinois 60418
   U.S.A.
   Telephone
   708-371-6990
   Fax
   708-371-6992
   email
   info@crown-chem.com

1.5 Emergency phone number(s)
   800-535-5053

SECTION 2: Hazard identification

   General hazard statement
   Causes serious eye damage; Causes severe skin burns and eye damage; Harmful if swallowed

2.1 Classification of the substance or mixture

   GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)
   - Skin corrosion/irritation, Cat. 1A
   - Eye damage/irritation, Cat. 1
   - Acute toxicity, oral, Cat. 4

2.2 GHS label elements, including precautionary statements

   Pictogram

   1. Corrosion; 2. Exclamation mark

   Signal word
   Danger

   Hazard statement(s)
   H302
   Harmful if swallowed
   H314
   Causes severe skin burns and eye damage
   H318
   Causes serious eye damage
Precautionary statement(s)

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands & skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER /doctor if you feel unwell.
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/shower.
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.
P310 Immediately call a POISON CENTER /doctor for treatment advice.
P321 Specific treatment (see details on label).
P330 Rinse mouth.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other hazards which do not result in classification
None identified

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Corrosive Mixture

Components

1. Sodium hydroxide
Concentration 60 - 80 % (By Weight)
EC no. 215-185-5
CAS no. 1310-73-2
Index no. 011-002-00-6

- Skin corrosion/irritation, Cat. 1A
H314 Causes severe skin burns and eye damage

Trade secret statement (OSHA 1910.1200(i))
The specific chemical identities and/or actual concentrations for one or more components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice Do not breathe dust or mists. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective rubber gloves and chemical splash goggles or face shield when using this product. If inhalable particles of dusts or mists may occur during use, wear NIOSH approved respiratory protection. Mix ONLY with water.

If inhaled Remove person to fresh air and keep comfortable for breathing. Immediately call a Poison Control Center or doctor for treatment advice.

In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a Poison Control Center or doctor for treatment advice.
In case of eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Control Center or doctor for treatment advice.

If swallowed
Rinse out mouth. Do NOT induce vomiting. Immediately call a Poison Control Center or doctor for treatment advice.

4.2 Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Treat exposure symptomatically. In all cases of eye contact, ingestion, or inhalation, contact a doctor or Poison Control Center immediately.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, fog or foam.

5.2 Specific hazards arising from the chemical
None known

5.3 Special protective actions for fire-fighters
Self-contained breathing apparatus.

Further information
Remove all persons from the vicinity. No responsive action should be taken without proper training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Initiate spill containment procedures immediately using containment or absorption methods. Keep people away from area. Put on appropriate protective equipment (see Section 8).

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Do not allow spilled material to enter sewers, waterways or soil. Neutralize with water. Mop, sweep or otherwise collect spilled material and hold for disposal. Consult local government authorities for allowable disposal methods. After removal, rinse area completely with water to remove residue.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with eyes, skin or clothing. Avoid inhalation of dust or mists. Use in a well ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Store in a locked location inaccessible to small children. Keep container closed when not in use. Store in a well ventilated area between 60-100°F (15-38°C).

Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Sodium hydroxide (CAS: 1310-73-2)
PEL (Inhalation): 2 mg/m3; USA (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): (C) 2 mg/m3; USA (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): (C) 2 mg/m3; USA (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): (C) 2 mg/m3; USA (ACGIH)
OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls
Use with adequate ventilation to maintain exposure limits below listed thresholds.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

Eye/face protection
Wear chemical splash goggles or face shield when using this product.

Skin protection
Wear protective rubber gloves, a long sleeve shirt and, if necessary, a rubber apron to prevent contact.

Body protection
Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid contact with clothing or shoes. Wash contaminated items before reuse. Avoid wearing contact lenses when using this product.

Respiratory protection
Wear a NIOSH respirator approved for corrosive dusts or mists.

Thermal hazards
No data available.

Environmental exposure controls
Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/form (physical state, color, etc.)</td>
<td>White Powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>pH</td>
<td>&gt;11.5 (1% solution)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>Non-Combustible</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper/lower flammability limits</td>
<td>No data available.</td>
</tr>
<tr>
<td>Upper/lower explosive limits</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>100% in 120°F Water</td>
</tr>
</tbody>
</table>
10.1 Reactivity
Product may react when diluted with water to produce heat up to boiling temperature. Product is highly reactive with acids and organic materials. Reactions may produce hazardous conditions, including violent splattering of corrosive materials and emission of chlorine gas. NEVER mix this product with other chemicals. Mix this product ONLY with water.

10.2 Chemical stability
Product is stable under normal storage and usage conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Heat, flames and sparks. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials
Acid, metals.

10.6 Hazardous decomposition products
None are expected under normal storage and usage conditions.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Skin corrosion/irritation
Irritation, pain, redness, blistering.

Serious eye damage/irritation
Irritation, pain, redness, watering.

Respiratory or skin sensitization
Coughing, choking, respiratory tract irritation, breathing difficulty.

Germ cell mutagenicity
No data available.

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
No data available.

Summary of evaluation of the CMR properties
No known significant effects or critical hazards.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information
No known significant effects or critical hazards.

SECTION 12: Ecological information

Toxicity
No specific data available for this mixture. Sodium Hydroxide is known to be toxic to aquatic life.

Persistence and degradability
No data available on product

Bioaccumulative potential
No data available on product

Mobility in soil
No data available.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects
No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Disposal of the product
Avoid disposal of this product. Use complete contents according to directions. Do not release contents into a municipal sewer except through normal dilution and usage. Do not release contents onto the ground or into any body of water. Dispose of empty container by offering for recycling if available, or into a landfill. Follow all applicable state and local regulations.

Disposal of contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

DOT (US)
UN Number: UN 3262
Class: 8
Packing Group: II
Proper Shipping Name: UN 3262, Corrosive Solid, Basic, Inorganic, N.O.S., 8, PG II (Contains Sodium Hydroxide)

Note: Certain package sizes of this product may qualify for exceptions to DOT’s packaging, labeling and other requirements, and thus may have different DOT shipping names. For bulk shipments, see the shipping documents.
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

**SARA 302 Components**
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Acute Health Hazard

**Massachusetts Right To Know Components**
Chemical name: Sodium hydroxide, CAS number: 1310-73-2

**New Jersey Right To Know Components**
Common name: SODIUM HYDROXIDE, CAS number: 1310-73-2

**Pennsylvania Right To Know Components**
Chemical name: Sodium hydroxide, CAS number: 1310-73-2

**California Prop. 65 Components**
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

The information herein is believed to be correct, but is given without warranty or guaranty of any kind, express or implied. The hazards provided in this Safety Data Sheet apply to the product in its concentrated form, and may differ significantly after dilution.

16.1 Further information/disclaimer
DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Crown Chemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Crown Chemical, Inc. has been advised of the possibility of such damages.