

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/21/2015

Revised on 11/21/2015

1 Identification

- **Product identifier**
- **Trade name:** Durabond 954 Base
- **Article number:** 954B
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Cotronics Corp
 131 47th Street
 Brooklyn, NY 11232
 USA
- **Information department:** In the event of an emergency please call Chemtrec at 1 800-424-9300 (24 hour)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Harmful

Harmful if swallowed. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.



Irritant

Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

- **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **Labeling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

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· **Code letter and hazard designation of product:**



Harmful

· **Risk phrases:**

Harmful if swallowed.

Irritating to eyes, respiratory system and skin.

Limited evidence of a carcinogenic effect.

May cause sensitisation by inhalation and skin contact.

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

· **Safety phrases:**

Keep away from food, drink and animal feedingstuffs.

When using do not eat or drink.

Do not breathe dust.

Avoid contact with skin and eyes.

Wear suitable protective clothing, gloves and eye/face protection.

In case of insufficient ventilation, wear suitable respiratory equipment.

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

After contact with skin, wash immediately with plenty of water

Keep container tightly closed.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Nonhazardous materials will not be listed separately

· **Components:**

7439-89-6	Iron	25-<50%
7440-02-0	Nickel	5-<20%
7440-47-3	Chromium	10-<25%
13983-17-0	Grammite	2.5-<10%

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7429-90-5	Aluminium Powder	2.5-<10%
16893-85-9	Alkali fluorosilicates	2.5-<10%
1309-48-4	Magnesium Oxide	2.5-<15%
1344-28-1	Alumina Oxide	2.5-<15%
7440-48-4	Cobalt	2.5-<10%
7439-96-5	Manganese	2.5-<10%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Move to a place with fresh air and keep at rest.

In case of unconsciousness and call a doctor.

If transporting move stably into a side position for transportation.

- **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

- **After eye contact:**

Rinse opened eye for several minutes under running water.

Get medical attention

- **After swallowing:** Seek medical treatment.

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters** Wear self-contained breathing apparatus, if necessary

- **Protective equipment:** Use personal protective equipment.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Avoid dust formation.

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
Sodium silicofluoride should be stowed away from acids.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Keep in sealed containers
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep sealed container(s) at room temperature
Recommended to keep in a cool, dry condition atmosphere.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

7440-02-0 Nickel

PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 0.015 mg/m ³ as Ni; See Pocket Guide App. A
TLV	Long-term value: 1.5* mg/m ³ elemental, *inhalable fraction

7440-47-3 Chromium

PEL	Long-term value: 1* 0.5** mg/m ³ *metal; **inorganic compds., as Cr
REL	Long-term value: 0.5* mg/m ³ *metal+inorg.compds.as Cr; See Pocket Guide App. C
TLV	Long-term value: 0.5 mg/m ³

13983-17-0 Grammite

PEL	Long-term value: 15*, 5** mg/m ³ *Total dusts **Respirable dusts
TLV	Long-term value: 10*, 3** mg/m ³ *Inhalable fraction **Respirable fraction

7429-90-5 Aluminium Powder

PEL	Long-term value: 15*, 5** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.

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TLV Long-term value: 1* mg/m³
as Al; *as respirable fraction

16893-85-9 Alkali fluorosilicates

PEL Long-term value: 2.5 mg/m³
as F

REL Long-term value: 2.5 mg/m³
as F

TLV Long-term value: 2.5 mg/m³
as F, BEI

1309-48-4 Magnesium Oxide

PEL Long-term value: 15* mg/m³
fume; *total particulate

TLV Long-term value: 10* mg/m³
*as inhalable fraction

1344-28-1 Alumina Oxide

PEL Long-term value: 15*; 5** mg/m³
*Total dust; ** Respirable fraction

REL Long-term value: 10* 5** mg/m³
as Al*Total dust**Respirable/pyro powd./welding f.

TLV Long-term value: 1* mg/m³
as Al; *as respirable fraction

7440-48-4 Cobalt

PEL Long-term value: 0.1* mg/m³
as Co; *for metal dust and fume

REL Long-term value: 0.05 mg/m³
as Co; metal dust & fume

TLV Long-term value: 0.02; NIC - 0.02* mg/m³
BEI; *hard metals:thoracic ;NIC-A2,RSEN;as W

7439-96-5 Manganese

PEL Ceiling limit value: 5 mg/m³
as Mn

REL Short-term value: 3 mg/m³
Long-term value: 1 mg/m³
fume, as Mn

TLV Long-term value: 0.02* 0.1* mg/m³
as Mn; *respirable **inhalable fraction

· Ingredients with biological limit values:**16893-85-9 Alkali fluorosilicates**

BEI 2 mg/L
urine
prior to shift
Fluoride (background, nonspecific)

3 mg/L
urine
end of shift
Fluoride (background, nonspecific)

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7440-48-4 Cobalt

BEI	15 µg/L urine end of shift at end of workweek Cobalt (background) 1 µg/L blood end of shift at end of workweek Cobalt (background, semi-quantitative)
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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Do not eat or drink while working.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:** Impervious gloves
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Powder
Color:	Grey
Odor:	Odorless
- **pH-value:** Not applicable.
- **Change in condition**

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not applicable
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**

Lower:	Not Applicable
Upper:	Not Applicable.
- **Vapor pressure:** Not applicable.

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· Density at 20 °C (68 °F):	2.13 g/cm ³ (17.775 lbs/gal)
· Solubility in / Miscibility with Water:	Insoluble.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability** Stable under recommended storage conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
Under special conditions, nickel can react with carbon monoxide in reducing atmospheres to form nickel carbonyl, Ni(CO)₄, a toxic gas.
- **Incompatible materials:** Metals
- **Hazardous decomposition products:**
Hazardous decomposition products of sodium silicofluoride include sodium fluoride, silicon tetra fluoride, and hydrogen fluoride.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7439-89-6 Iron

Oral	LD50	200 mg/kg (Human)
------	------	-------------------

7440-02-0 Nickel

Oral	LD50	> 9000 mg/kg (Rat)		
	TCLo	0.4-0.5 mg/m ³ (Rat)	0.4	
			Inhalative	
		40W-I		
		0.5		
			Inhalative	
24 hours				
13W-C				
0.13 mg/m ³ (Rabbit)				
	Inhalative			
	6 hours			
	35W-I			
TDLo	200 mg/kg (Rat)			
	Oral			

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16893-85-9 Alkali fluorosilicates

Oral LD50 125 mg/kg (Rat)

7440-48-4 Cobalt

Oral LD50 6170 mg/kg (Rat)

· **Primary irritant effect:**· **On the skin:**

Mild, 500 mg, rabbit (Sodium Silicofluoride)

Irritating to skin.

· **On the eye:**

Irritating effect.

Severe, 100 mg, rabbit (Sodium Silicofluoride)

· **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

7440-02-0	Nickel	1
7440-47-3	Chromium	3
13983-17-0	Grammite	3
16893-85-9	Alkali fluorosilicates	3
7440-48-4	Cobalt	2B

· **NTP (National Toxicology Program)**

7440-02-0	Nickel	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the materials are listed

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12 Ecological information· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Highly toxic to foliage

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Dispose material in accordance with federal, state, local and international regulations.

* 14 Transport information

- | | |
|--|-----------------------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Not Regulated for Transport |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Not Regulated for Transport |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Not Regulated for Transport |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not Regulated for Transport |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA**

· Section 313 (specific toxic chemical listings):

7440-02-0 Nickel

7440-47-3 Chromium

7429-90-5 Aluminium Powder

1344-28-1 Alumina Oxide

7440-48-4 Cobalt

7439-96-5 Manganese

· Section 302 (extremely hazardous substance):

None of the ingredients are listed

· Section 304 (emergency release notification):

None of the ingredients are listed

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· Sections 311/312 (hazards)		
7440-02-0	Nickel	Chronic, Acute
7440-47-3	Chromium	Chronic
7429-90-5	Aluminium Powder	Fire
16893-85-9	Alkali fluorosilicates	Acute
1344-28-1	Alumina Oxide	Chronic, Acute
· TSCA (Toxic Substances Control Act) (Substances not listed):		
13983-17-0	Grammite	
· RCRA (Resource Conservation and Recovery Act)		
7440-47-3	Chromium	D012
· Proposition 65		
· Chemicals known to cause cancer:		
7440-02-0	Nickel	
7440-48-4	Cobalt	
· Chemicals known to cause reproductive toxicity:		
None of the materials are listed		
· Chemicals known to cause reproductive toxicity for females:		
None of the materials are listed		
· Chemicals known to cause reproductive toxicity for males:		
None of the materials are listed		
· Chemicals known to cause developmental toxicity:		
None of the materials are listed		
· Pennsylvania Right To Know Components		
7439-89-6	Iron	
7440-02-0	Nickel	
7440-47-3	Chromium	
7429-90-5	Aluminium Powder	
16893-85-9	Alkali fluorosilicates	
1309-48-4	Magnesium Oxide	
1344-28-1	Alumina Oxide	
· Massachusetts Right To Know Components		
7440-02-0	Nickel	
7440-47-3	Chromium	
7429-90-5	Aluminium Powder	
16893-85-9	Alkali fluorosilicates	
1309-48-4	Magnesium Oxide	
1344-28-1	Alumina Oxide	
· New Jersey Right To Know Components		
7439-89-6	Iron	
7440-02-0	Nickel	
7440-47-3	Chromium	
7429-90-5	Aluminium Powder	
16893-85-9	Alkali fluorosilicates	

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1309-48-4	Magnesium Oxide	
1344-28-1	Alumina Oxide	
· Rhode Island Right To Know Components		
7440-02-0	Nickel	
7440-47-3	Chromium	
· Minnesota Right To Know Components		
None of the ingredients are listed		
· Florida Right To Know Components		
None of the ingredients are listed		
· Carcinogenic categories		
· EPA (Environmental Protection Agency)		
7440-47-3	Chromium	D
7439-96-5	Manganese	D
· TLV (Threshold Limit Value established by ACGIH)		
7440-02-0	Nickel	A5
7440-47-3	Chromium	A4
7429-90-5	Aluminium Powder	A4
16893-85-9	Alkali fluorosilicates	A4
1309-48-4	Magnesium Oxide	A4
1344-28-1	Alumina Oxide	A4
7440-48-4	Cobalt	A3
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
7440-02-0	Nickel	

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

· Hazard symbols:

Harmful

· Risk phrases:

Harmful if swallowed.

Irritating to eyes, respiratory system and skin.

Limited evidence of a carcinogenic effect.

May cause sensitisation by inhalation and skin contact.

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

· Safety phrases:

Keep away from food, drink and animal feedingstuffs.

When using do not eat or drink.

Do not breathe dust.

Avoid contact with skin and eyes.

Wear suitable protective clothing, gloves and eye/face protection.

In case of insufficient ventilation, wear suitable respiratory equipment.

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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*In case of accident by inhalation: remove casualty to fresh air and keep at rest.
After contact with skin, wash immediately with plenty of water
Keep container tightly closed.*

16 Other information

To the best of our knowledge, the information contained herein is correct. Cotronics does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. We do not guarantee that the hazards described herein are the only hazards that exist.

· **Department issuing SDS:** Environment protection department.

· **Contact:** Dr. Alan Reznik

· **Date of preparation / last revision** 11/21/2015 / 3

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered.**

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1 Identification

- **Product identifier** A2101
- **Trade name:** Durabond 954A Activator
- **Article number:** 954A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Cotronics Corp
 131 47th Street
 Brooklyn, NY 11232
 USA
- **Information department:** In the event of an emergency please call Chemtrec at 1 800-424-9300 (24 hour)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2A H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Harmful

Harmful if swallowed.



Irritant

Irritating to skin. Irritating to eyes.

- **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **Labeling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

- **Code letter and hazard designation of product:**



Corrosive

- **Hazard-determining components of labeling:**

Sodium Hydroxide

- **Risk phrases:**

Harmful if swallowed.
 Irritating to skin.
 Irritating to eyes.

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· Safety phrases:*Keep away from food, drink and animal feedingstuffs.**When using do not eat or drink.**Avoid contact with skin.**Avoid contact with eyes.**Wear suitable protective clothing, gloves and eye/face protection.**In case of insufficient ventilation, wear suitable respiratory equipment.**If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.**In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.**In case of accident by inhalation: remove casualty to fresh air and keep at rest.**After contact with skin, wash immediately with plenty of water**Keep container tightly closed.***· Classification system:****· NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

· Other hazards**· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures**· Description:** Nonhazardous materials will not be listed separately**· Components:**

1310-73-2	Sodium Hydroxide	2.5-<5%
1312-76-1	Silicate	25-<50%

4 First-aid measures

· Description of first aid measures**· General information:** Immediately remove any clothing soiled by the product.**· After inhalation:***Move to a place with fresh air and keep at rest.**In case of unconsciousness and call a doctor.**If transporting move stably into a side position for transportation.***· After skin contact:***Wash with soap and water.**If irritated or rash develops seek medical attention**Immediately rinse with water.**If skin irritation continues, consult a doctor.*

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- **After eye contact:**
Rinse opened eye for several minutes under running water.
Get medical attention
- **After swallowing:** Never Induce vomiting, immediately call a doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters** Wear self-contained breathing apparatus, if necessary
- **Protective equipment:** Use personal protective equipment.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Keep in sealed containers
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep sealed container(s) at room temperature
Recommended to keep in a cool, dry condition atmosphere.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:**
Personal protection is required while machining this material. Use suitable face/eye/hand protection.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Do not eat or drink while working.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:** Impervious gloves
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form:** Liquid
 - Color:** Colorless
 - Odor:** Odorless
- **pH-value:** Not determined.
- **Change in condition**
 - Melting point/Melting range:** Undetermined.
 - Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** 100 °C (212 °F)
- **Flammability (solid, gaseous):** Not Applicable.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not Applicable
 - Upper:** Not Applicable.
- **Vapor pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.3 g/cm³ (10.849 lbs/gal)
- **Solubility in / Miscibility with**
 - Water:** Not miscible or difficult to mix.

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- **Solvent content:**
- Organic solvents:** 0.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability** Stable under recommended storage conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

1310-73-2 Sodium Hydroxide

Oral LD50 2000 mg/kg (Rat)

- **Primary irritant effect:**

- **On the skin:**

Strong caustic effect on skin and mucous membranes.

Irritating to skin.

- **On the eye:** Strong caustic effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the materials are listed

- **NTP (National Toxicology Program)**

None of the materials are listed

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the materials are listed

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12 Ecological information

· Toxicity

· Aquatic toxicity:

1310-73-2 Sodium Hydroxide

EC50/48 h	40.38 mg/l (Daphnia magna) Immobilization
LC50/96 h	125 mg/l (Mosquito fish (Gambusia affinis)) 45.4 mg/l (Rainbow trout (Oncorhynchus mykiss))

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

*

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Dispose material in accordance with federal, state, local and international regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR, ADN, IMDG, IATA** Not Regulated for Transport

· **UN proper shipping name**

· **DOT, ADR, ADN, IMDG, IATA** Not Regulated for Transport

· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class** Not Regulated for Transport

· **Packing group**

· **DOT, ADR, IMDG, IATA** Not Regulated for Transport

· **Environmental hazards:**

· **Marine pollutant:** No

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· **Special precautions for user** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **UN "Model Regulation":** -

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **SARA**

· **Section 313 (specific toxic chemical listings):**

None of the ingredients are listed.

· **Section 302 (extremely hazardous substance):**

None of the ingredients are listed

· **Section 304 (emergency release notification):**

None of the ingredients are listed

· **Sections 311/312 (hazards)**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act) (Substances not listed):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed

· **Chemicals known to cause reproductive toxicity:**

None of the materials are listed

· **Chemicals known to cause reproductive toxicity for females:**

None of the materials are listed

· **Chemicals known to cause reproductive toxicity for males:**

None of the materials are listed

· **Chemicals known to cause developmental toxicity:**

None of the materials are listed

· **Pennsylvania Right To Know Components**

1310-73-2 Sodium Hydroxide

· **Massachusetts Right To Know Components**

1310-73-2 Sodium Hydroxide

· **New Jersey Right To Know Components**

1310-73-2 Sodium Hydroxide

· **Rhode Island Right To Know Components**

None of the ingredients are listed

· **Minnesota Right To Know Components**

None of the ingredients are listed

· **Florida Right To Know Components**

None of the ingredients are listed

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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

If non of the ingredients are listed

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Corrosive

· **Hazard-determining components of labeling:**

Sodium Hydroxide

· **Risk phrases:**

Harmful if swallowed.

Irritating to skin.

Irritating to eyes.

· **Safety phrases:**

Keep away from food, drink and animal feedingstuffs.

When using do not eat or drink.

Avoid contact with skin.

Avoid contact with eyes.

Wear suitable protective clothing, gloves and eye/face protection.

In case of insufficient ventilation, wear suitable respiratory equipment.

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

After contact with skin, wash immediately with plenty of water

Keep container tightly closed.

16 Other information

To the best of our knowledge, the information contained herein is correct. Cotronics does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. We do not guarantee that the hazards described herein are the only hazards that exist.

· **Department issuing SDS:** Environment protection department.

· **Contact:** Dr. Alan Reznik

· **Date of preparation / last revision** 10/07/2015 / 8

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
· *** Data compared to the previous version altered.**

USA