

SECTION 1: Identification of the hazardous chemical and of the supplier

1.1. Product identifier

Product form : Mixtures
 Product name : 81160-S Syrup
 Product code : 81160S

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Scale and Corrosion Inhibitor

1.3. Supplier's details

Dober Chemical Corp
 11230 Katherine's Crossing
 60517 Woodridge, IL - US
 T 630-410-7300 - F 630-410-7444
regulatory@dober.com - www.dober.com

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2014)

Acute Tox. 4 (Oral)	H302
Skin Corr. 1B	H314
Eye Dam. 1	H318
Carc. 1B	H350
Repr. 1B	H360

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2014)

Hazard pictograms (GHS-MY) :



Signal word (GHS MY) : Danger

Contains : Disodium Tetraborate, Anhydrous; Disodium Trioxosilicate; Phenolphthalein; Sodium Nitrate; Sodium Nitrite

Hazard statements (GHS MY) : H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H350 - May cause cancer
 H360 - May damage fertility or the unborn child

Precautionary statements (GHS MY) : P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash hands, forearms and face thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

2.3. Other hazards not contributing to the classification

No additional information available

SECTION 3: Composition and information of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

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Name	Product identifier	%	Classification according to the United Nations GHS (Rev. 4, 2011)
Sodium Nitrite	(CAS-No.) 7632-00-0	10 - 30	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Acute Tox. Not classified (Inhalation:dust,mist) Eye Irrit. 2, H319 Aquatic Acute 1, H400
Disodium Tetraborate, Anhydrous	(CAS-No.) 1330-43-4	5 - 10	Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Eye Irrit. 2, H319 Repr. 1B, H360FD Aquatic Acute Not classified
Sodium Nitrate	(CAS-No.) 7631-99-4	5 - 10	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Aquatic Acute Not classified
Disodium Trioxosilicate	(CAS-No.) 6834-92-0	5 - 10	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 STOT SE 3, H335 Aquatic Acute Not classified
Sodium Mercaptobenzothiazole	(CAS-No.) 2492-26-4	< 1	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. Not classified (Dermal) Acute Tox. Not classified (Inhalation:dust,mist) Skin Corr. 1C, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Phenolphthalein	(CAS-No.) 77-09-8	< 1	Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361f
Sodium Hydroxide	(CAS-No.) 1310-73-2	< 1	Flam. Sol. Not classified Ox. Sol. Not classified Met. Corr. 1, H290 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute Not classified

Name	Product identifier	%
Sodium Nitrite	(CAS-No.) 7632-00-0	10 - 30
Disodium Tetraborate, Anhydrous	(CAS-No.) 1330-43-4	5 - 10
Sodium Nitrate	(CAS-No.) 7631-99-4	5 - 10
Disodium Trioxosilicate	(CAS-No.) 6834-92-0	5 - 10
Sodium Mercaptobenzothiazole	(CAS-No.) 2492-26-4	< 1
Phenolphthalein	(CAS-No.) 77-09-8	< 1
Sodium Hydroxide	(CAS-No.) 1310-73-2	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

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4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Disodium Tetraborate, Anhydrous (1330-43-4)		
Malaysia	PEL TWA (mg/m ³)	1 mg/m ³
Sodium Hydroxide (1310-73-2)		
Malaysia	OEL - Ceilings (mg/m ³)	2 mg/m ³

Exposure limit values of other components

No additional information available

8.2. Monitoring

No additional information available

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8.3. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.4. Personal protective equipment

Hand protection:

Wear protective gloves/protective clothing/eye protection/face protection

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. In case of inadequate ventilation wear respiratory protection

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Color	: Red / Purple
Odor	: odorless
Odor threshold	: No data available
pH	: 12.1 - 12.45
Melting point, Freezing point	: Melting point: Not applicable
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Evaporation rate	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Minimum ignition energy	: No data available
Solubility	: Water: 100 %
Specific gravity / density	: Specific gravity / density: 1.388 - 1.42 g/ml
Relative density	: No data available
Viscosity	: No data available

SECTION 10: Stability and reactivity

Chemical stability	: Stable under normal conditions
Conditions to avoid	: None under recommended storage and handling conditions (see section 7)
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced
Possibility of hazardous reactions	: None under normal use
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE MY (oral)	420.919 mg/kg body weight
Unknown acute toxicity (GHS MY)	32.05% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 20.81% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

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Sodium Nitrite (7632-00-0)	
LD50 oral rat	85 mg/kg
LD50 oral	77 mg/kg
LC50 inhalation rat (mg/l)	5.5 mg/l/4h
LC50 inhalation rat (Dust/Mist - mg/l/4h)	5.5 mg/l/4h
Disodium Tetraborate, Anhydrous (1330-43-4)	
LD50 oral rat	2660 mg/kg
LD50 oral	1200 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Sodium Nitrate (7631-99-4)	
LD50 oral rat	1267 mg/kg
LD50 oral	3700 mg/kg
Disodium Trioxosilicate (6834-92-0)	
LD50 oral rat	1153 mg/kg
LD50 oral	600 mg/kg
Sodium Mercaptobenzothiazole (2492-26-4)	
LD50 oral rat	1476 mg/kg
LD50 dermal rabbit	> 7940 mg/kg
LC50 inhalation rat (mg/l)	> 8.2 mg/l (Exposure time: 6 h)
Sodium Hydroxide (1310-73-2)	
LD50 dermal rabbit	1350 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 12.1 - 12.45
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Unknown hazards to the aquatic environment (GHS-MY)	: Contains 1.71 % of components with unknown hazards to the aquatic environment
Aquatic acute	: Not classified
Aquatic chronic	: Not classified

Sodium Nitrite (7632-00-0)	
LC50 fish 1	0.19 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
LC50 fish 2	0.092 - 0.13 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Log Pow	-3.7 (at 25 °C)
Disodium Tetraborate, Anhydrous (1330-43-4)	
LC50 fish 1	340 mg/l (Exposure time: 96 h - Species: Limanda limanda)
EC50 Daphnia 1	1085 - 1402 mg/l (Exposure time: 48 h - Species: Daphnia magna)
BCF fish 1	(no evidence of bioaccumulation)
Sodium Nitrate (7631-99-4)	
LC50 fish 1	2000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish 2	994.4 - 1107 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
Log Pow	-3.8 (at 25 °C)
Disodium Trioxosilicate (6834-92-0)	
LC50 fish 1	210 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])

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Disodium Trioxosilicate (6834-92-0)	
LC50 fish 2	210 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
Sodium Mercaptobenzothiazole (2492-26-4)	
LC50 fish 1	0.3 - 1.1 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
LC50 fish 2	3.8 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	1.9 - 5.1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Log Pow	-0.46
Sodium Hydroxide (1310-73-2)	
EC50 Daphnia 1	40 mg/l

12.2. Persistence and degradability

81160-S Syrup	
Persistence and degradability	No additional information available

12.3. Bioaccumulative potential

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Bioaccumulative potential	No additional information available

Sodium Nitrite (7632-00-0)	
Log Pow	See section 12.1 on ecotoxicology

Disodium Tetraborate, Anhydrous (1330-43-4)	
BCF fish 1	See section 12.1 on ecotoxicology

Sodium Nitrate (7631-99-4)	
Log Pow	See section 12.1 on ecotoxicology

Sodium Mercaptobenzothiazole (2492-26-4)	
Log Pow	See section 12.1 on ecotoxicology

12.4. Mobility in soil

81160-S Syrup	
Mobility in soil	No additional information available

Sodium Nitrite (7632-00-0)	
Log Pow	See section 12.1 on ecotoxicology

Sodium Nitrate (7631-99-4)	
Log Pow	See section 12.1 on ecotoxicology

Sodium Mercaptobenzothiazole (2492-26-4)	
Log Pow	See section 12.1 on ecotoxicology

12.5. Other adverse effects

Ozone	: Not classified
GWPMix comment	: No known effects from this product.
Other adverse effects	: No additional information available

SECTION 13: Disposal information

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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SECTION 14: Transportation information

14.1. UN number

UN-No. (UN RTDG)	: 1719
UN-No. (IMDG)	: 1719
UN-No. (IATA)	: 1719

14.2. Proper Shipping Name

Proper Shipping Name (UN RTDG)	: CAUSTIC ALKALI LIQUID, N.O.S. (Disodium Trioxosilicate)
Proper Shipping Name (IMDG)	: CAUSTIC ALKALI LIQUID, N.O.S. (Disodium Trioxosilicate)
Proper Shipping Name (IATA)	: Caustic alkali liquid, n.o.s. (Disodium Trioxosilicate)

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14.3. Transport hazard class(es)

UN RTDG

Transport hazard class(es) (UN RTDG) : 8

Hazard labels (UN RTDG) : 8



IMDG

Transport hazard class(es) (IMDG) : 8

Hazard labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8

Hazard labels (IATA) : 8



14.4. Packing group

Packing group (UN RTDG) : II

Packing group (IMDG) : II

Packing group (IATA) : II

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- UN RTDG

Special provision (UN RTDG) : 274

Limited quantities (UN RTDG) : 1L

Excepted quantities (UN RTDG) : E2

Packing instruction (UN RTDG) : P001, IBC02

Portable tank and bulk container special instructions (UN RTDG) : T11

Portable tank and bulk container special provisions (UN RTDG) : TP2, TP27

- IMDG

Special provision (IMDG) : 274

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

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Tank instructions (IMDG) : T11
Tank special provisions (IMDG) : TP2, TP27
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG) : A

- IATA

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provision (IATA) : A3
ERG code (IATA) : 8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

14.8. 14.8. Hazchem or Emergency Action Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

No additional information available

15.2. 15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Version : 1.0
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Abbreviations and acronyms : ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
EC50 - Median effective concentration
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
LD50 - Median lethal dose

Other information : None.

Full text of H-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Acute Tox. Not classified (Dermal)	Acute toxicity (dermal) Not classified
Acute Tox. Not classified (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Not classified
Acute Tox. Not classified (Oral)	Acute toxicity (oral) Not classified
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute Not classified	Hazardous to the aquatic environment - Acute Hazard Not classified
Carc. 1B	Carcinogenicity Category 1B
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Met. Corr. 1	Corrosive to metals Category 1
Ox. Sol. 3	Oxidizing solids Category 3
Repr. 1B	Reproductive toxicity Category 1B
Repr. 1B	Reproductive toxicity Category 1B
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3

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H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H360	May damage fertility or the unborn child
H360FD	May damage fertility. May damage the unborn child
H400	Very toxic to aquatic life

SDS Malaysia - Dober

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes 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. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.