

SECTION 1: Identification : Product identifier and chemical identity

1.1. Product identifier

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

1.2. Recommended use of the chemical and restrictions on use

Recommended use : Scale and Corrosion Inhibitor

1.3. Supplier's details

Dober Chemical Corp
 11230 Katherine's Crossing
 Suite 100
 60517 Woodridge, IL - US
 T 630-410-7300 - F 630-410-7444
regulatory@dober.com - www.dober.com

1.4. Emergency phone number

Emergency number : 1-800-255-3924 / 1-813-248-0585
 ChemTel

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Acute toxicity (oral), Category 4 H302
 Skin corrosion/irritation, Category 1 H314
 Serious eye damage/eye irritation, Category 1 H318
 Carcinogenicity, Category 1B H350
 Reproductive toxicity, Category 1B H360

2.2. Label elements

Hazard pictograms (GHS AU) :



Signal word (GHS AU) : Danger

Contains : Sodium Nitrite (10 – 30 %); Disodium Tetraborate, Anhydrous (5 – 10 %); Sodium Nitrate (5 – 10 %); Disodium Trioxosilicate (5 – 10 %); Phenolphthalein (< 1 %)

Hazard statements (GHS AU) : 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 AU) : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P260 - Do not breathe mist, spray, vapours.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P280 - Wear eye protection, face protection, protective clothing, protective gloves.
 P281 - Use personal protective equipment as required.
 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.

Unknown acute toxicity (GHS AU) : 26.92% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
 7.62% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

Name	CAS-No.	Compound type	%	Classification according to the United Nations GHS (Rev. 4, 2011)
Sodium Nitrite	7632-00-0		10 – 30	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Eye Irrit. 2A, H319 Aquatic Acute 1, H400
Disodium Tetraborate, Anhydrous	1330-43-4		5 – 10	Acute Tox. 5 (Oral), H303 Repr. 1B, H360
Sodium Nitrate	7631-99-4		5 – 10	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
Disodium Trioxosilicate	6834-92-0		5 – 10	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 STOT SE 3, H335
Phenolphthalein	77-09-8		< 1	Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately. Wash with plenty of water. If skin irritation or rash occurs: Get immediate medical advice/attention. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor.
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. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Immediately call a POISON CENTER/doctor.

4.2. Symptoms caused by exposure

Symptoms/effects	: May cause cancer. May damage fertility or the unborn child. Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: May cause an allergic skin reaction.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns. Swallowing a small quantity of this material will result in serious health hazard.

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

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

General measures	: Clean up any spills as soon as possible, using an absorbent material to collect it.
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5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Clean up any spills as soon as possible, using an absorbent material to collect it.

6.1.1. For non-emergency personnel

- Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe mist, spray, vapours. Evacuate unnecessary personnel.

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". Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

SECTION 7: Handling and storage, including how the chemical may be safely used

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 mist, spray, vapours. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- 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. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well-ventilated place. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters - exposure standards

Disodium Tetraborate, Anhydrous (1330-43-4)

Australia	TWA (mg/m ³)	1 mg/m ³
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Exposure limit values for the other components

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

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

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8.4. Personal protective equipment

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear Protective gloves.
Eye protection	: Chemical goggles or face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator
Environmental exposure controls	: Avoid release to the environment.
Other information	: Do not eat, drink or smoke during use.

9.1. SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	:
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: 12.1 – 12.45
Relative evaporation rate (butylacetate=1)	: No data available
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)	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Density	: Density : 1.388 – 1.42 g/ml
Solubility	: Water: 100 %
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Explosive limits	: No data available
Minimum ignition energy	: No data available
Fat solubility	: No data available

10.1. SECTION 10: Stability and reactivity

Reactivity	: Thermal decomposition generates : Corrosive vapours. Thermal decomposition generates : Corrosive vapours
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: None under normal use.
Conditions to avoid	: Direct sunlight. Extremely high or low temperatures.
Incompatible materials	: Strong acids. Strong bases.
Hazardous decomposition products	: fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

11.1. SECTION 11: Toxicological information

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

ATE AU (oral)	415.508 mg/kg bodyweight
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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

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Sodium Nitrite (7632-00-0)	
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	2660 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 2 mg/m ³ (Exposure time: 4 h)
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

Unknown acute toxicity (GHS AU)	: 26.92% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 7.62% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
Skin corrosion/irritation	: Causes severe skin burns. pH: 12.1 – 12.45
Serious eye damage/irritation	: Causes serious eye damage. pH: 12.1 – 12.45
Respiratory or skin sensitisation	: 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

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Density	1.388 – 1.42 g/ml

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

12.1. Ecotoxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Ecology - water	: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Unknown hazards to the aquatic environment (GHS AU)	: Contains 1.71 % of components with unknown hazards to the aquatic environment
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
Other information	: Avoid release to the environment.

Sodium Nitrite (7632-00-0)	
LC50 fish 1	0.19 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [flow-through])
LC50 fish 2	0.092 – 0.13 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [flow-through])
Partition coefficient n-octanol/water (Log Pow)	-3.7 (at 25 °C)

Disodium Tetraborate, Anhydrous (1330-43-4)	
LC50 fish 1	340 mg/l (Exposure time: 96 h - Species: <i>Limanda limanda</i>)
EC50 Daphnia 1	1085 – 1402 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i>)
BCF fish 1	(no evidence of bioaccumulation)

Sodium Nitrate (7631-99-4)	
LC50 fish 1	2000 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [static])
LC50 fish 2	994.4 – 1107 mg/l (Exposure time: 96 h - Species: <i>Oncorhynchus mykiss</i> [static])

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Sodium Nitrate (7631-99-4)	
Partition coefficient n-octanol/water (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])
LC50 fish 2	210 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)

12.2. Persistence and degradability

81160-S Syrup	
Persistence and degradability	May cause long-term adverse effects in the environment.

Sodium Nitrate (7631-99-4)	
Not rapidly degradable	

Disodium Trioxosilicate (6834-92-0)	
Not rapidly degradable	

12.3. Bioaccumulative potential

81160-S Syrup	
Bioaccumulative potential	Not established.

Sodium Nitrite (7632-00-0)	
Partition coefficient n-octanol/water (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)	
Partition coefficient n-octanol/water (Log Pow)	See section 12.1 on ecotoxicology

12.4. Mobility in soil

Sodium Nitrite (7632-00-0)	
Partition coefficient n-octanol/water (Log Pow)	See section 12.1 on ecotoxicology

Sodium Nitrate (7631-99-4)	
Partition coefficient n-octanol/water (Log Pow)	See section 12.1 on ecotoxicology

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

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Fluorinated greenhouse gases	False

Sodium Nitrite (7632-00-0)	
Fluorinated greenhouse gases	False

Disodium Tetraborate, Anhydrous (1330-43-4)	
Fluorinated greenhouse gases	False

Sodium Nitrate (7631-99-4)	
Fluorinated greenhouse gases	False

Disodium Trioxosilicate (6834-92-0)	
Fluorinated greenhouse gases	False

Phenolphthalein (77-09-8)	
Fluorinated greenhouse gases	False

SECTION 13: Disposal considerations	
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Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information	
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14.1. UN number	
UN-No. (ADG)	: 1719

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

14.2. Proper Shipping Name - Addition

Proper Shipping Name (ADG) : 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)

14.3. Transport hazard class(es)

ADG

Transport hazard class(es) (ADG) : 8
Danger labels (ADG) : 8



IMDG

Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8
Danger labels (IATA) : 8



14.4. Packing group

Packing group (ADG) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Marine pollutant : No

14.6. Special precautions for user

Specific storage requirement : No data available
Shock sensitivity : No data available

14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

UN-No. (ADG) : 1719
Special provision (ADG) : 274
Limited quantities (ADG) : 1I
Packing instructions (ADG) : P001, IBC02
Portable tank and bulk container instructions (ADG) : T11
Portable tank and bulk container special provisions (ADG) : TP2, TP27

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Transport by sea

UN-No. (IMDG)	: 1719
Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
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

Air transport

UN-No. (IATA)	: 1719
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 provisions (IATA)	: A3
ERG code (IATA)	: 8L

14.8. Hazchem or Emergency Action Code

Hazchem Code	: 2R
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SECTION 15: Regulatory information

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

Listed on the AICS (Australian Inventory of Chemical Substances)	: Listed on the AICS (Australian Inventory of Chemical Substances)
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15.2. International agreements

No additional information available

SECTION 16: Any other relevant information

Indication of changes:

Modified. Hazards identification. Handling and storage. Stability and reactivity. Regulatory information.

Revision date	: 20/08/2020
Other information	: None.

Classification:

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

Full text of H-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Acute Tox. 5 (Oral)	Acute toxicity (oral), Category 5
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Muta. 2	Germ cell mutagenicity, Category 2
Ox. Sol. 3	Oxidising Solids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2

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Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H303	May be 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.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.

SDS Australia Dober

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