SAFETY DATA SHEET

Revision Number 16.2
SDS No. 801
NGHS / English

1. IDENTIFICATION

Product identifier

Product Name METALGUARD® A81
Heavy-duty conventional antifreeze additive package

Other means of identification

Product Code(s) A81ND/CI-476700 (no dye), A81G3/CI-476800 (G3-green dye)

Recommended use of the chemical and restrictions on use

Recommended Use Industrial, manufacturing, or laboratory use

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Identification WEBA TECHNOLOGY

Address NFS CAP WEBA, LLC
900 Cummings Center, Suite 226-U
Beverly, Massachusetts 01915 USA

Telephone Phone: 1-681-265-2314 or 1-608-819-8806
Fax: 608-237-2054

E-mail info@webacorp.com

Emergency Telephone Number CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements
Causes severe skin burns and eye damage

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dusts or mists

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor
Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
Wash contaminated clothing before reuse
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Immediately call a POISON CENTER or doctor
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Sodium nitrite	7632-00-0	10-30	-	-
Sodium Benzoate	532-32-1	2-5	-	-
Sodium Tolyltriazole	64665-57-2	5-15	-	-

Sodium Mercaptobenzothiazole	2492-26-4	2-7	-	-
Sodium Borate	12179-04-3	2-7	-	-
Potassium Hydroxide	1310-58-3	<1	-	-

4. FIRST AID MEASURES

First aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

Skin contact Get immediate medical advice/attention. Wash off immediately with soap and plenty of water for at least 15 minutes.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products Nitrogen oxides (NOx). Sodium oxides.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium Borate 12179-04-3	STEL: 6 mg/m³ inhalable particulate matter	(vacated) TWA: 10 mg/m³	TWA: 1 mg/m³

	TWA: 2 mg/m³ inhalable particulate matter		
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m³	(vacated) Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Sodium Borate 12179-04-3	TWA: 1 mg/m³ STEL: 3 ppm	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 1 mg/m³
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m³	Ceiling: 2 mg/m³	CEV: 2 mg/m³	Ceiling: 2 mg/m³

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992). See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing. Chemical resistant apron.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Liquid
Appearance	Clear to slightly cloudy
Odor	Characteristic
Color	Clear to amber, additive may darken over time. With green dye (G3) color: very dark, opaque green.
Odor Threshold	No information available

Property	**Values**	**Remarks Method**
pH	11.5-12.8	
Melting / freezing point	No data available	None known
Boiling point / boiling range	>100°C (>212°F)	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	Not flammable	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	10 mmHg at 20°C (68°F)	None known
Vapor density	>2.0 (air = 1)	None known
Relative density	1.195-1.225 at 21°C (70°F)	

Water Solubility	Completely soluble	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	No data available	
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	1.195-1.225 at 21°C (70°F)
Bulk Density	1.195-1.225 at 21°C (70°F)
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials Acids. Oxidizing agent.

Hazardous Decomposition Products Nitrogen oxides (NOx). Sodium oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark

blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Unknown acute toxicity No information available

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium nitrite	85 mg/kg (Rat)	-	5.5 mg/L (Rat) 4 h
Sodium Benzoate	4070 mg/kg (Rat)	-	-
Sodium Tolyltriazole	1980 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
Sodium Borate	2403 mg/kg (Rat)	-	-
Potassium Hydroxide	4070 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium nitrite 7632-00-0	-	Group 2A	-	X

Legend

IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Classification based on data available for ingredients. Contains a known or suspected reproductive toxin.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Sodium nitrite	-	96h LC50: = 2.3 mg/L (Pimephales promelas) 96h LC50: 0.4 - 0.6 mg/L (Oncorhynchus mykiss) 96h LC50: 0.092 - 0.13 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.19 mg/L (Oncorhynchus mykiss) 96h LC50: = 20 mg/L (Pimephales promelas) 96h LC50: 0.65 - 1 mg/L (Oncorhynchus mykiss)	-	-
Sodium Benzoate	-	96h LC50: 420 - 558 mg/L (Pimephales promelas) 96h LC50: > 100 mg/L (Pimephales promelas)	EC50 = 500 mg/L 24 h	48h EC50: < 650 mg/L
Potassium Hydroxide	-	96h LC50: = 80 mg/L (Gambusia affinis)	-	-

Persistence and Degradability No information available.

Bioaccumulation

Chemical name	Log Pow
Sodium nitrite	-3.7
Sodium Benzoate	-2.13
Potassium Hydroxide	0.83

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D002

California Hazardous Waste Codes 122

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste
Sodium nitrite 7632-00-0	Toxic Ignitable Reactive

Potassium Hydroxide 1310-58-3	Corrosive

14. TRANSPORT INFORMATION

DOT

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8
Packing Group	II
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II
Emergency Response Guide Number	154

TDG

Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II

MEX

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8
Packing Group	II
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II

ICAO

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8
Packing Group	II
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II

IATA

Proper Shipping Name	CORROSIVE LIQUID, N.O.S.
ERG Code	8L
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II

IMDG/IMO

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8
Packing group	II
EmS-No.	F-A, S-B
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II

RID

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8
Packing Group	II
Classification code	C9
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II
ADR/RID-Labels	

ADR

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8,

Packing Group	II
Classification code	C9
Tunnel restriction code	(E)
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II (E)

ADN

UN-No.	UN1760
Proper Shipping Name	CORROSIVE LIQUIDS, N.O.S.
Hazard Class	8
Packing Group	II
Classification code	C9
Special Provisions	274
Description	UN1760 CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, SODIUM NITRITE), 8, II
Hazard Labels Limited	8
Quantity	1 L

15. REGULATORY INFORMATION

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

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Sodium nitrite - 7632-00-0	7632-00-0	10-30	1.0

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No

Reactive Hazard No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium nitrite 7632-00-0	100 lb	-	-	X
Potassium Hydroxide 1310-58-3	1000 lb	-	-	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium nitrite 7632-00-0	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
Potassium Hydroxide 1310-58-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

Chemical name	CAS	Listed as causing:
Sodium Tetraborate	12179-04-3	Considered but not listed.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Sodium nitrite 7632-00-0	X	X	X	X	X
Sodium Borate 12179-04-3	X	X			
Potassium Hydroxide 1310-58-3	X	X	X	X	

16. OTHER INFORMATION

NFPA **Health hazards** 3 **Flammability** 0 **Instability** 0 **Physical and Chemical Properties** -

HMIS **Health hazards** 3 * **Flammability** 0 **Physical hazards** 0 **Personal Protection** X

Chronic Hazard Star Legend ** = Chronic Health Hazard*

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Revision Note 08-Nov-2018 (prior version)

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet