

SAFETY DATA SHEET



Issue date 27-Mar-2015

P/N
Version 1

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier

Product name ASSAULTS 580
Pure substance/mixture Mixture.

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

Recommended Use Refer to the Asterion, LLC Technical Data Bulletin for this product.
For Industrial Use Only.

1.3. Details of the supplier of the safety data sheet

Supplier

Asterion, LLC
P.O. Box 68809
5425 West 84th Street
Indianapolis, IN 46268

For further information, please contact 317-875-0051.

Web site address www.asterionstc.com

1.4. Emergency telephone number

Emergency telephone 317-875-0051 or (after hours: 800-424-9300, Only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident.)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Classification according to 67/548/EEC
Full text of R-phrases: see section 16

Hazard symbols

C - Corrosive

R-code(s)

Xn;R20/21/22 - C;R34 - Xi;R41

2.2. Label Elements



Signal Word

DANGER

hazard statements

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P321 - Specific treatment (see Section 4)

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

precautionary statements

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P330 - Rinse mouth

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P363 - Wash contaminated clothing before reuse

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P321 - Specific treatment (see supplemental first aid instructions on this label)

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other Hazards

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture

Chemical name	EC No	CAS No	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Sodium bisulfate	Present	7681-38-1	90-95	Xi; R41	Eye Dam. 1 (H318)	No data available
Sodium silicofluoride	Present	16893-85-9	1-5	T; R23/24/25 Xn; R22 (except those specified elsewhere in the annex)	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331)	No data available
Sodium nitrate	Present	7631-99-4	<2	-	No data available	No data available
Sodium bifluoride	Present	1333-83-1	<2	T; R25 C; R34	Acute Tox. 3 (H301) Skin Corr. 1B (H314)	No data available

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Immediate medical attention is required.
Inhalation	Remove victim to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical attention.
Skin contact	Immediately remove contaminated clothing and shoes. Flush skin thoroughly with cool water for at least 15 minutes. Wash skin with soap and water. Wash clothing. If irritation persists, get medical attention.
Eye Contact	Immediately flush eyes in a directed stream of water for at least 15 minutes while lifting the upper and lower eyelids intermittently to ensure complete irrigation. Get medical attention immediately.
Ingestion	If conscious and alert, rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

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

Symptoms	Inhalation irritation and coughing. Causes skin irritation and possible burns. Severe eye irritation and possible corneal injury. Harmful if swallowed.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Keep victim under observation.
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Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing material suitable for surrounding fire. Water spray, foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

No information available.

5.2. Special hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Dissolves readily in water to form an acid solution.

5.3. Advice for firefighters

Fire fighters should wear proper protective equipment and self-contained breathing apparatus with full face piece when fighting chemical fires. Move containers from fire area if it can be done without risk. .

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for Containment

Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Ventilate spill area. Wear protective equipment. Prevent entry into sewers or waterways. Shovel or sweep up dry product for recycling or disposal. Place in dry DOT-approved container and cover. Neutralize the final traces and flush with water. Comply with all regulations on spill reporting.

6.4. Reference to other sections

Other Information

See Section 12: ECOLOGICAL INFORMATION.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. Add product slowly to avoid splashing.

General hygiene considerations

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

7.3. Specific end use(s)

Risk Management Measures

The information required is contained in this Safety Data Sheet.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium silicofluoride 16893-85-9	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F TWA: 2.5 mg/m ³ dust (vacated) TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³ F
Sodium bifluoride 1333-83-1	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F TWA: 2.5 mg/m ³ dust (vacated) TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³ F

ACGIH TLV Threshold Limit Value.

OSHA PEL Permissible Exposure Limit.

NIOSH IDLH Immediately Dangerous to Life or Health.

Exposure guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering controls Showers. Eyewash stations. A system of local and/or general exhaust is recommended to keep employee exposures below the airborne exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal protective equipment (PPE)

Eye/face Protection Tight sealing safety goggles. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury. .

Skin protection Wear chemical resistant gloves such as butyl rubber, natural rubber, neoprene or nitrile. Suitable protective clothing. Protective shoes or boots.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	solid
Appearance	off-white powder
Odor	Acidic odor
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	
Melting point/freezing point	Not established	
Boiling point/boiling range	Not applicable	
Flash Point	Not applicable	
Evaporation Rate	Not applicable	

Flammability (solid, gas)	Not applicable
Flammability Limits in Air	
Upper Flammability Limit	Not applicable
Lower Flammability Limit	Not applicable
Vapor pressure	Not applicable
Vapor Density	Not applicable
Specific gravity	Not applicable
Water solubility	Appreciable
Solubility(ies)	No information available
Partition Coefficient (n-octanol/water)	Not applicable
Autoignition Temperature	Not applicable
Decomposition temperature	Not established
Kinematic viscosity	Not applicable
Dynamic viscosity	Not applicable

9.2. Other information

VOC Content(%)	Not applicable
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Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable at normal temperatures and pressure.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization

Hazardous polymerization does not occur.

Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Avoid storage with incompatible materials, high humidity, freezing temperatures, excessive heat, sparks or open flame.

10.5. Incompatible materials

Strong alkalis. Cyanides, Sulfides. Chlorine-based bleaching agents. Strong acids. powdered metals. Organic materials. Strong oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may generate. oxides of sulfur. Hydrogen fluoride. oxides of nitrogen. smoke and fumes. Will react with cyanide salts to generate poisonous hydrogen cyanide gas. Will react with sulfides to produce poisonous hydrogen sulfide gas. .

Section 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Inhalation

Dusts are extremely corrosive to the entire respiratory tract. Breathing dust can destroy the mucous membranes and can cause pneumonitis. Breathing high concentrations may result in death.

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Eye Contact	Dusts are extremely corrosive to the eyes. Brief contact causes severe eye damage. Prolonged contact causes permanent eye injury.
Skin contact	Contact with skin can cause irritation and ulceration especially under the fingernails.
Ingestion	Dusts or solids are extremely corrosive to the mouth and throat. Swallowing dusts or solids causes severe and rapid burning of the mouth, throat and digestive tract accompanied by severe pain, vomiting and collapse.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium bisulfate	2490 mg/kg (Rat)		
Sodium silicofluoride	125 mg/kg (Rat)		
Sodium nitrate	1267 mg/kg (Rat)		

Chronic Toxicity

Chronic Toxicity Chronic ingestion of fluoride may cause bone and kidney damage or mottling of teeth. Chronic fluoride inhalation may cause nosebleeds and sinus trouble. Absorption of sodium nitrate into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium silicofluoride		Group 2A Group 3		X
Sodium nitrate		Group 2A		
Sodium bifluoride		Group 3		

IARC (International Agency for Research on Cancer)

Group 3 - Unclassifiable as to Carcinogenicity in Humans

Group 2A - Probably Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Target organ effects Eyes, Skin, Respiratory system, Gastrointestinal tract (GI), bone, Kidney, Teeth, Nasal Cavities

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium bisulfate			190: 48 h Daphnia magna mg/L EC50
Sodium silicofluoride		65: 96 h Poecilia reticulata mg/L LC50 static	
Sodium nitrate		2000: 96 h Lepomis macrochirus mg/L LC50 static 994.4 - 1107: 96 h Oncorhynchus mykiss mg/L LC50 static	

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Chemical name	Partition coefficient
Sodium nitrate	-3.8

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products

Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Do not discharge into waterways or sewer systems. Disposal will depend on the nature of waste material.

Contaminated packaging

Since empty containers retain product residues, all labeled hazardous precautions must be observed. Do not repackage product. Do not reuse container.

Waste codes / waste designations according to EWC / AVV

Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

DOT (US)

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s., (Sodium bifluoride)
Hazard Class 8
UN/ID no UN3260
Packing group PGII
Marine pollutant No
Emergency Response Guide Number 154

IMDG

UN/ID no UN3260
Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s., (Sodium bifluoride)
Hazard Class 8
Packing group PGII
Marine pollutant No

IATA

UN/ID no UN3260
Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s., (Sodium bifluoride)
Hazard Class 8
Packing group PGII

Section 15. REGULATORY INFORMATION

International Inventories

All of the components in this product are on or exempt from the following inventories: U.S.A. (TSCA), Canada

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(DSL/NDL), Europe (EINECS/ELINCS/NLP), Japan (ENCS), China (IECSC), Korea (ECL), Philippines (PICCS), Australia (AICS)

International Inventory Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - 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
IECSC - China Inventory of Existing 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 nitrate	7631-99-4	<2	1.0

SARA 311/312 Hazard Categories

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 bifluoride	100 lb			X

CAA (Clean Air Act), Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

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	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium bifluoride	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania
Sodium silicofluoride	X	X	X
Sodium nitrate	X	X	X

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Sodium bifluoride	X	X	X
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International Regulations

Chemical name	Carcinogenicity	Exposure Limits
Sodium silicofluoride		Mexico: TWA 2.5 mg/m ³
Sodium bifluoride		Mexico: TWA 2.5 mg/m ³

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R22 - Harmful if swallowed
R41 - Risk of serious damage to eyes
R34 - Causes burns
R25 - Toxic if swallowed
R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed
H314 - Causes severe skin burns and eye damage
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H318 - Causes serious eye damage

Issue date 27-Mar-2015
Revision date Not Applicable
Revision note Not Applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet