



## Safety Data Sheet

Version number: 10.6  
SDS# S6000

2020-11-11

### SECTION 1: Identification

#### 1.1 Product identifier

Trade name **A-6000**  
Other means of identification Activator Solution for Iron CHEMetrics, VACUettes & Vacu-vials Kits

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

Component of water analysis test kits: K-6003, K-6010, K-6010A, K-6010B, K-6010C, K-6010D, K-6023, K-6203, K-6210, K-6210D

#### 1.3 Details of the supplier of the safety data sheet

CHEMetrics, Inc.  
4295 Catlett Road  
Midland VA 22728  
United States

Telephone: 1-540-788-9026  
Telefax: 1-540-788-4856  
e-mail: technical@chemetrics.com  
Website: www.chemetrics.com

#### 1.4 Emergency telephone number

Emergency information service ChemTel Inc.: 1-800-255-3924, +01-813-248-0585

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.10	acute toxicity (oral)	3	Acute Tox. 3	H301
3.1D	acute toxicity (dermal)	4	Acute Tox. 4	H312
3.1I	acute toxicity (inhal.)	3	Acute Tox. 3	H331
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.4S	skin sensitization	1	Skin Sens. 1	H317
4.1A	hazardous to the aquatic environment - acute hazard	3	Aquatic Acute 3	H402

For full text of abbreviations: see SECTION 16.

## 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word                danger

- Pictograms

GHS05, GHS06



- Hazard statements

H290	May be corrosive to metals.
H301+H331	Toxic if swallowed or if inhaled.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H402	Harmful to aquatic life.

- Precautionary statements

P234	Keep only in original packaging.
P260	Do not breathe dusts or mists.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in a corrosion resistant container with a resistant inner liner.
P501	Dispose of contents/container to industrial combustion plant.






## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Ammonium thioglycolate	CAS No 5421-46-5	41	Acute Tox. 2 / H300 Skin Sens. 1 / H317 Met. Corr. 1 / H290	  
thioglycolic acid	CAS No 68-11-1	31	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 4 / H332 Skin Corr. 1B / H314	 
water	CAS No 7732-18-5	28		

For full text of abbreviations: see SECTION 16.

## SECTION 4: First-aid measures

### 4.1 Description of first- aid measures

#### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

#### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media

Water jet

### 5.2 Special hazards arising from the substance or mixture

Substance or mixture corrosive to metals.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulfur oxides (SO<sub>x</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

**Wear Impact- and splash-resistant eyewear.**

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

### 7.3 Other information

**For optimum analytical performance, store in the dark and at room temperature.**

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
US	thioglycolic acid	68-11-1	PEL (CA)	1	3.8						Cal/ OSHA PEL
US	thioglycolic acid	68-11-1	REL	1 (10 h)	4 (10 h)						NIOSH REL
US	thioglycolic acid	68-11-1	TLV®	1							ACGIH® 2019

Notation

Ceiling-C

STEL

TWA

ceiling value is a limit value above which exposure should not occur

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Ammonium thioglycolate	5421-46-5	DNEL	1.41 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Ammonium thioglycolate	5421-46-5	DNEL	2.06 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
thioglycolic acid	68-11-1	DNEL	1.58 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
thioglycolic acid	68-11-1	DNEL	4.54 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
thioglycolic acid	68-11-1	DNEL	4.54 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
thioglycolic acid	68-11-1	DNEL	2.24 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Ammonium thioglycolate	5421-46-5	PNEC	38 µg/l	aquatic organisms	freshwater	short-term (single instance)
Ammonium thioglycolate	5421-46-5	PNEC	3.8 µg/l	aquatic organisms	marine water	short-term (single instance)
Ammonium thioglycolate	5421-46-5	PNEC	3.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
thioglycolic acid	68-11-1	PNEC	0.027 mg/l	aquatic organisms	freshwater	short-term (single instance)
thioglycolic acid	68-11-1	PNEC	0.003 mg/l	aquatic organisms	marine water	short-term (single instance)
thioglycolic acid	68-11-1	PNEC	0.5 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
thioglycolic acid	68-11-1	PNEC	0.1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
thioglycolic acid	68-11-1	PNEC	0.01 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
thioglycolic acid	68-11-1	PNEC	0.004 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

## Skin protection

### - Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### - Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

## Respiratory protection

In case of inadequate ventilation wear respiratory protection.

## Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Product description** Activator Solution: Plastic bottle, contains approximately 9 mL of liquid reagent. Test kits contain one (1) bottle of solution. Activator Solution packs contain six (6) bottles of solution.

#### Appearance

Physical state	liquid
Color	colorless to pale pink
Odor	sharp - characteristic

#### Other safety parameters

pH (value)	4 – 5
Melting point/freezing point	-16.5 °C
Initial boiling point and boiling range	115 °C at 1,021 hPa
Flash point	125 °C
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	0.16 hPa at 25 °C
Density	not determined
Vapor density	this information is not available

Relative density	1.2 (water = 1)
Solubility(ies)	
- Water solubility	miscible in any proportion
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	315 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". Substance or mixture corrosive to metals.

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

Oxidizers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

#### Acute toxicity

Toxic if swallowed.



**- Acute toxicity estimate (ATE)**

Oral 80.34 mg/kg

**Acute toxicity estimate (ATE) of components of the mixture**

Name of substance	CAS No	Exposure route	ATE
Ammonium thioglycolate	5421-46-5	oral	50 mg/kg
thioglycolic acid	68-11-1	oral	73 mg/kg
thioglycolic acid	68-11-1	dermal	848 mg/kg
thioglycolic acid	68-11-1	inhalation: vapor	11 mg/l/4h
thioglycolic acid	68-11-1	inhalation: dust/mist	1.388 mg/l/4h

**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Respiratory or skin sensitization**

May cause an allergic skin reaction.

**Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

**Carcinogenicity**

Shall not be classified as carcinogenic.

**Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

**Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

**Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**SECTION 12: Ecological information****12.1 Toxicity**

Harmful to aquatic life.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Ammonium thioglycolate	5421-46-5	LC50	>100 mg/l	fish	96 h
Ammonium thioglycolate	5421-46-5	EC50	38 mg/l	aquatic invertebrates	48 h
Ammonium thioglycolate	5421-46-5	ErC50	27 mg/l	algae	72 h
thioglycolic acid	68-11-1	LC50	>100 mg/l	fish	96 h
thioglycolic acid	68-11-1	EC50	38 mg/l	aquatic invertebrates	48 h
thioglycolic acid	68-11-1	ErC50	27 mg/l	algae	72 h

**12.2 Persistence and degradability**

Data are not available.

**12.3 Bioaccumulative potential**

Data are not available.

**12.4 Mobility in soil**

Data are not available.

**12.5 Results of PBT and vPvB assessment**

Data are not available.

**12.6 Other adverse effects**

Data are not available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

please consider the relevant national or regional provisions

**SECTION 14: Transport information****14.1 UN number**

2922

**14.2 UN proper shipping name**

UN2922, Corrosive liquid, toxic, n.o.s., (contains: thioglycolic acid, Ammonium thioglycolate), 8 (6.1), II

Technical name (hazardous ingredients)

thioglycolic acid, Ammonium thioglycolate

**14.3 Transport hazard class(es)**

Class

8 (corrosive substances)

Subsidiary risk(s)

6.1 (acute toxicity)

**14.4 Packing group**

II (substance presenting medium danger)

**14.5 Environmental hazards**

non-environmentally hazardous acc. to the dangerous goods regulations

**14.6 Other relevant information**

Shipping container markings and labels for this product, as received, may vary from the contents of section 14 of the SDS for one or both of the following reasons:

- CHEMetrics has packaged this product as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations.
  - CHEMetrics has packaged this product as part of a test kit or reagent set composed of various chemical reagents and elected to ship as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
- In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

The cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations****Transport of dangerous goods by road or rail (49 CFR US DOT)**

Index number	2922
Proper shipping name	UN2922, Corrosive liquid, toxic, n.o.s., (contains: thioglycolic acid, Ammonium thioglycolate), 8 (6.1), II
Class	8
Subsidiary risk(s)	6.1
Packing group	II
Danger label(s)	8+6.1



Special provisions (SP)	B3, IB2, T7, TP2
ERG No	154

**International Maritime Dangerous Goods Code (IMDG)**

UN number	2922
Proper shipping name	UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (contains: thioglycolic acid, Ammonium thioglycolate), 8 (6.1), II
Class	8
Subsidiary risk(s)	6.1
Marine pollutant	-
Packing group	II
Danger label(s)	8+6.1



Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B

### International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	2922
Proper shipping name	UN2922, Corrosive liquid, toxic, n.o.s., (contains: thioglycolic acid, Ammonium thioglycolate), 8 (6.1), II
Class	8
Subsidiary risk(s)	6.1
Packing group	II
Danger label(s)	8+6.1



Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

#### National regulations (United States)

**Toxic Substance Control Act (TSCA)** all ingredients are listed

#### Superfund Amendment and Reauthorization Act (SARA TITLE III )

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

**Clean Air Act**

none of the ingredients are listed

**Right to Know Hazardous Substance List**

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
thioglycolic acid	68-11-1		CO

Legend

CO Corrosive

**California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987**

none of the ingredients are listed

**Industry or sector specific available guidance(s)****NPCA-HMIS® III**

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	3	major injury likely unless prompt action is taken and medical treatment is given
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	3	material that, under emergency conditions, can cause serious or permanent injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**National inventories**

Country	Inventory	Status
US	TSCA	all ingredients are listed
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed

**Legend**

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information, including date of preparation or last revision

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**List of relevant phrases (code and full text as stated in chapter 2 and 3)**

Code	Text
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H402	Harmful to aquatic life.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.