



Issue Date 21-Dec-2017

Revision Date 21-Dec-2017

Version 1.2

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product Name	MolyVer <sup>®</sup> 1 Molybdenum Reagent
Other means of identification	
Product Code(s)	2604299
Safety data sheet number	M00063
Recommended use of the chemica	and restrictions on use
Recommended Use	Indicator for molybdenum
Uses advised against	No information available
Details of the supplier of the safety	data sheet
Initial Supplier Identifier Hach Sales & Service LP. 3020 Gore Road, London, Ontario N5 4T7 Canada 1-800-665-7635	Manufacturer Address Hach Company P.O. Box 389 Loveland, CO 80539 USA +1(970) 669-3050 V
Emergency telephone number	
Emergency Telephone	+1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST

# 2. HAZARDS IDENTIFICATION

## **Classification**

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	
Skin sensitization	
Germ cell mutagenicity	
Carcinogenicity	
Reproductive toxicity	
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	

## Label elements

#### Signal word - Danger

#### Hazard statements

H302 - Harmful if swallowed H315 - Causes skin irritation H318 - Causes serious eye damage

H335 - May cause respiratory irritation



#### **Precautionary Statements**

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

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

P330 - Rinse mouth

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

- P271 Use only outdoors or in a well-ventilated area
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

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

#### **Unknown Acute Toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

#### **Other Information**

Not applicable.

# **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### Substance

Not applicable

#### <u>Mixture</u>

Chemical name	CAS No.	Percent Range	Units	HMIRA #
Succinic acid	110-15-6	50 - 60%	g	-
Butanedioic acid, disodium salt	150-90-3	30 - 40%	g	-
Glycine,	36679-96-6	10 - 20%	g	-
N,N-1,2-cyclohexanediylbis[N-(c			_	
arboxymethyl)-, trisodium salt				

## Synonyms

Chemical name	CAS No.	Percent Range	Units	HMIRA #
Succinic acid	110-15-6	50 - 60%	g	-
Butanedioic acid, disodium salt	150-90-3	30 - 40%	g	-
Glycine,	36679-96-6	10 - 20%	g	-
N,N-1,2-cyclohexanediylbis[N-(c			_	
arboxymethyl)-, trisodium salt				

# 4. FIRST AID MEASURES

## **Description of 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. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.
Eye contact	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).
Most important symptoms and effe	cts, both acute and delayed_
Symptoms	Burning sensation.
Indication of any immediate medica	I attention and special treatment needed
Note to physicians	Treat symptomatically.

# **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	No information available.
Hazardous combustion products	May emit acrid smoke and fumes.
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

WHMIS Notice

Only persons properly qualified to respond to an emergency involving hazardous

EN / HGHS

	substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.
Personal precautions	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.
Other Information	Refer to protective measures listed in Sections 7 and 8.
Environmental precautions	
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods and material for containme	ent and cleaning up_
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	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. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

#### 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. Store locked up.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

 Exposure Limits
 This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Legend	See section 16 for terms and abbreviations
<u>Appropriate engineering controls</u> Engineering Controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, su	ch as personal protective equipment
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.
Hand Protection	Wear suitable gloves. Impervious gloves.

Eye/face protection	Tight sealing safety goggles.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing.
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.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
Thermal hazards	None under normal processing.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

Physical state Appearance Odor	powder None	Solid		Color Odor threshold	white No data ava	ilable
Property_			Values			Remarks • Method
Molecular weigh	t		No data availa	ble		
рН			4.28			5% Solution
Melting point/fre	ezing point		No data availa	ble		
Boiling point / bo	oiling range		No data availa	ble		
Evaporation rate			Not applicable			
Vapor pressure			Not applicable			
Vapor density (a	ir = 1)		Not applicable			
Specific gravity (	water = 1 / air = 1)		1.52			
Partition Coeffici	ent (n-octanol/wat	er)	log K <sub>ow</sub> ~ -1.72			
Soil Organic Car Coefficient	bon-Water Partition	า	log K <sub>oc</sub> ~ 0.25			
Autoignition tem	perature		No data availa	ble		
Decomposition t	emperature		85-95 °C / 18	5-203 °F		
Dynamic viscosi	ty		Not applicable			
Kinematic viscos	sity		Not applicable			
Solubility(ies)						

## Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

## Solubility in other solvents

Chemical Name	Solubility classification	<u>Solubility</u>	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

#### **Other Information**

#### **Metal Corrosivity**

#### Steel Corrosion Rate Aluminum Corrosion Rate

0.13 mm/yr / 0.01 in/yr 4.27 mm/yr / 0.17 in/yr

#### Volatile Organic Compounds (VOC) Content Not applicable

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Succinic acid	110-15-6	No data available	Х
Butanedioic acid, disodium salt	150-90-3	No data available	-
Glycine,	36679-96-6	No data available	-
N,N-1,2-cyclohexanediylbis[N-(carbox			
ymethyl)-, trisodium salt			

#### **Explosive properties**

Upper explosion limit Lower explosion limit		No data available No data available
Flammable properties		
Flash point Method		Not applicable No information available
Flammability Limit in Air Upper flammability limit: Lower flammability limit:		No data available No data available
Oxidizing properties		No data available.
Bulk density		No data available
Particle Size	No information available	
Particle Size Distribution	No information available	

# **10. STABILITY AND REACTIVITY**

Reactivity Not applicable.

#### Chemical stability Stability

Stable under normal conditions.

#### Explosion data Sensitivity to Mechanical Impact None Sensitivity to Static Discharge None.

#### <u>Possibility of Hazardous Reactions</u> Possibility of Hazardous Reactions None under normal processing.

## Hazardous polymerization None under normal processing.

#### <u>Conditions to avoid</u> Conditions to avoid

None known based on information supplied.

Incompatible materials Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

## Hazardous Decomposition Products

Heating to decomposition releases toxic fumes of carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
Skin contact	Causes skin irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.

Aggravated Medical Conditions Skin disorders. Eye disorders. Respiratory disorders.

Toxicologically synergistic None known. products

Toxicokinetics, metabolism and No information available. distribution

#### Symptoms related to the physical, chemical and toxicological characteristics Symptoms Redness. Burning.

Redness. Burning. May cause blindness. May cause redness and tearing of the eyes.

No data available
No data available

#### **Unknown Acute Toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

## Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	1,960.00 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available

ATEmix (inhalation-gas) No information available

#### Ingredient Acute Toxicity Data Oral Exposure Route

Oral Exposure Route				If available, see data below			
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicologica	al effects		ature references and urces for data
Succinic acid (50 - 60%) CAS#: 110-15-6	Rat LD₅₀	2260 mg/kg	None reported	None rep	orted		Vendor SDS
Butanedioic acid, disodium salt (30 - 40%) CAS#: 150-90-3	Rat LD₅o	> 1200 mg/kg	None reported	None rep	oorted	Econom	0 (Organization for iic Co-operation and Development)
Dermal Exposure Ro Inhalation (Dust/Mist Inhalation (Vapor) Ex Inhalation (Gas) Expo	) Exposure R posure Route osure Route	9		If available, see da If available, see da If available, see da If available, see da	ata below ata below	-	
<u>Product Specific Tar</u> <u>Data</u> Oral Exposure Route Dermal Exposure Ro Inhalation (Dust/Mist Inhalation (Vapor) Ex Inhalation (Gas) Expo	ute ) Exposure R posure Route	oute		No data available No data available No data available No data available No data available			
Ingredient Specific T Oral Exposure Route Dermal Exposure Ro Inhalation (Dust/Mist Inhalation (Vapor) Ex Inhalation (Gas) Exp	ute ) Exposure R posure Route	oute		a <u>ta</u> If available, see da If available, see da If available, see da If available, see da If available, see da	ata below ata below ata below		
Aspiration toxicity If available, see data b Kinematic viscosity	elow			Not applicable			
<b>Product Skin Corros</b> No data available.	ion/Irritation I	<u>Data</u>					
Ingredient Skin Corre If available, see data b		n Data					
<b>Product Serious Eye</b> No data available.	Damage/Eye	Irritation Data					
Ingredient Eye Dama If available, see data b		on Data					
Chemical name	Test metho	od Specie	s Reporte dose	ed Exposure time	Resu	llts	Key literature references and

			dose	time		references and sources for data
Succinic acid (50 - 60%) CAS#: 110-15-6	Standard Draize Test	Rabbit	0.750 mg	None reported	Corrosive to eyes	ECHA (The European Chemicals Agency)

## **Sensitization Information**

#### <u>Product Sensitization Data</u> Skin Sensitization Exposure Route Respiratory Sensitization Exposure Route

No data available. No data available.

## Ingredient Sensitization Data

Skin Sensitization Exposure Route
<b>Respiratory Sensitization Exposure Route</b>

#### **Chronic Toxicity Information**

Product Specific Target Organ Toxicity Repeat Dose Data	
Oral Exposure Route	No data available.
Dermal Exposure Route	No data available.
Inhalation (Dust/Mist) Exposure Route	No data available.
Inhalation (Vapor) Exposure Route	No data available.
Inhalation (Gas) Exposure Route	No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure DataOral Exposure RouteIf available, see data belowDermal Exposure RouteIf available, see data belowInhalation (Dust/Mist) Exposure RouteIf available, see data belowInhalation (Vapor) Exposure RouteIf available, see data belowInhalation (Gas) Exposure RouteIf available, see data below

Product Carcinogenicity Data Oral Exposure Route Dermal Exposure Route Inhalation (Dust/Mist) Exposure Route Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route If available, see data bel No data available No data available No data available

No data available

No data available

If available, see data below. If available, see data below.

#### Ingredient Carcinogenicity Data

	Bata				
Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Succinic acid	110-15-6	-	-	-	-
Butanedioic acid, disodium salt	150-90-3	-	-	-	-
Glycine, N,N-1,2-cyclohexanediylbi s[N-(carboxymethyl)-, trisodium salt	36679-96-6	-	-	-	-

## Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of	Does not apply
Labor)	

Oral Exposure Route Dermal Exposure Route Inhalation (Dust/Mist) Exposure Route Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route If available, see data below If available, see data below

Product Germ Cell Mutagenicity *invitro* Data No data available.

# Ingredient Germ Cell Mutagenicity invitro Data

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Succinic acid (50 - 60%) CAS#: 110-15-6	DNA inhibition	Human fibroblast	None reported	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Germ Cell Mutagenicity invivo Data Oral Exposure Route Dermal Exposure Route Inhalation (Dust/Mist) Exposure Route Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route

Ingredient Germ Cell Mutagenicity invivo Data Oral Exposure Route Dermal Exposure Route Inhalation (Dust/Mist) Exposure Route Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route

Product Reproductive Toxicity Data Oral Exposure Route Dermal Exposure Route Inhalation (Dust/Mist) Exposure Route Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route

Ingredient Reproductive Toxicity Data Oral Exposure Route Inhalation (Dust/Mist) Exposure Route Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route No data available No data available No data available No data available If available, see data below If available, see data below

No data available

No data available No data available No data available No data available No data available

If available, see data below If available, see data below If available, see data below If available, see data below

# **12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 

Product Ecological Data Aquatic toxicity

Fish Crustacea Algae No data available No data available No data available

# Ingredient Ecological Data

#### Aquatic toxicity

Fish	If available, see ingredient data below				
Chemical name	Exposure	Species	Endpoint	Reported	Key literature references and
	time		type	dose	sources for data
Succinic acid	96 hours	None reported	LC50	2060000 mg/L	Estimation through ECOSARS
(50 - 60%)					v1.11 part of the Estimation
CAS#: 110-15-6					Programs Interface (EPI) Suite <sup>™</sup>
Glycine,	96 hours	None reported	LC50	356000 mg/L	Estimation through ECOSARS
N,N-1,2-cyclohexane					v1.11 part of the Estimation
diylbis[N-(carboxymet					Programs Interface (EPI) Suite <sup>™</sup>
hyl)-, trisodium salt					
(10 - 20%)					
CAS#: 36679-96-6					
Crustacea		lf av	<u>ailable, see i</u>	ngredient data b	pelow
Chemical name	Exposure	Species	Endpoint	Reported	Key literature references and
	time		type	dose	sources for data
Succinic acid	48 Hours	None reported	EC50	918830 mg/L	Estimation through ECOSARS
(50 - 60%)					v1.11 part of the Estimation
CAS#: 110-15-6					Programs Interface (EPI) Suite <sup>™</sup>
Glycine,	48 Hours	None reported	EC <sub>50</sub>	26162 mg/L	Estimation through ECOSARS

N,N-1,2-cyclohexane diylbis[N-(carboxymet hyl)-, trisodium salt (10 - 20%) CAS#: 36679-96-6					v1.11 part of the Estimation Programs Interface (EPI) Suite™
Algae		If a	vailable, see i	ngredient data b	pelow
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Succinic acid (50 - 60%) CAS#: 110-15-6	96 hours	None reported	EC <sub>50</sub>	254630 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymet hyl)-, trisodium salt (10 - 20%) CAS#: 36679-96-6	96 hours	None reported	EC <sub>50</sub>	56103 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

#### **Other Information**

## Persistence and degradability

# Product Biodegradability Data No data available.

## Ingredient Biodegradability Data

Chemical name	Test method	Biodegradation	Exposure time	Results
Butanedioic acid, disodium salt (30 - 40%) CAS#: 150-90-3	OECD Test No. 303: Simulation Test - Aerobic Sewage Treatment A: Activated Sludge Units; B: Biofilms	None reported	None reported	Not readily biodegradable
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymet hyl)-, trisodium salt (10 - 20%) CAS#: 36679-96-6		None reported	None reported	Not readily biodegradable

#### **Bioaccumulation**

## **Product Bioaccumulation Data**

No data available.

#### Partition Coefficient (n-octanol/water)

**Ingredient Bioaccumulation Data** 

## <u>Mobility</u>

Soil Organic Carbon-Water Partition Coefficient

 $log \; K_{\rm oc} \sim 0.25$ 

log Kow ~ -1.72

## Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

#### 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.

## **14. TRANSPORT INFORMATION**

U.S. DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated
Note:	No special precautions necessary.

#### Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

## **15. REGULATORY INFORMATION**

#### **Regulatory information**

<u>National Inventories</u> DSL/NDSL

Complies

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories	
TSCA	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Does not comply
TCSI	Complies
AICS	Does not comply
NZIoC	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory 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

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances NZIOC - New Zealand Inventory of Chemicals

Canada - CEPA - Mercury Containing Products None

#### International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

# Special Comments

None

## NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and Chemical Properties -
HMIS	Health hazards - 3	Flammability - 0	Physical Hazards - 0	Personal protection - X
				- See section 8 for more
				information

#### Key or legend to abbreviations and acronyms used in the safety data sheet

NIOSH IDLH ACGIH NDF		Immediately Dangerou ACGIH (American Cor no data		mental Industrial Hygienists)			
Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION							
TWA	TWA (time-weigh	ted average)	STEL	STEL (Short Term Exposure Limit)			
MAC	Maximum Allowal	ole Concentration	Ceiling	Ceiling Limit Value			
Х	Listed		Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.			
SKN*	Skin designation		SKN+	Skin sensitization			
RSP+ C M	Respiratory sensi Carcinogen mutagen	tization	R	Hazard Designation Reproductive toxicant			
Prepared By	Hach Product Compliance Department						
Issue Date 21-Dec-2017		21-Dec-2017					
<b>Revision Date</b>		21-Dec-2017					
Revision Note SDS sections updated							
Disclaimer							

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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End of Safety Data Sheet