

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 01/01/2019 Revision date: NA Supersedes: NA Version: 1.0

SECTION 1: Identification	
1.1. Identification	
Product form :	Substance
Substance name :	Oxalic Acid, Dihydrate
CAS-No. :	6153-56-6
Product code :	CG6004
Formula :	C2H2O4.2H2O
Synonyms :	dicarboxylic acid C2, dihydrate / dicarboxylic acid, dihydrate / ethandionic acid, dihydrate / ethanedioic acid, dihydrate / oxiric acid, dihydrate
1.2. Recommended use and restrictions or	n use
Use of the substance/mixture :	Textile Cleansing product: component Leather/fur: dyeing Reagent
Recommended use :	Laboratory chemicals
Restrictions on use :	Not for food, drug or household use
1.3. Supplier	
DAWN SCI 121 Liberty street Metuchen, NJ 08840 T: 732-902-6300, F : 973-802-1005 www.dawnsci.com   care@dawnsci.com	
1.4. Emergency telephone number	
Emergency number :	CHEMTREC: 1-800-424-9300
SECTION 2: Hazard(s) identification	
2.1. Classification of the substance or mix	ture
GHS-US classification	
Skin corrosion/irritationH314Category 1BSerious eye damage/eyeH318irritationCategory 1	Causes severe skin burns and eye damage Causes serious eye damage
Full text of H statements : see section 16	
2.2. GHS Label elements, including precau	itionary statements
GHS-US labeling Hazard pictograms (GHS-US) :	GHS05
Signal word (GHS-US) : Hazard statements (GHS-US) : Precautionary statements (GHS-US) :	<ul> <li>Danger</li> <li>H314 - Causes severe skin burns and eye damage</li> <li>P260 - Do not breathe dust.</li> <li>P264 - Wash exposed skin thoroughly after handling.</li> <li>P280 - Wear protective gloves, protective clothing, eye protection, face protection.</li> <li>P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</li> <li>P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</li> <li>P310 - Immediately call a poison center or doctor/physician.</li> <li>P363 - Wash contaminated clothing before reuse.</li> <li>P405 - Store locked up.</li> <li>P501 - Dispose of contents/container to comply with local, state and federal regulations If inhaled: Remove person to fresh air and keep comfortable for breathing</li> </ul>

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0.0	Other hezerde which de net recult in	alassification			
Cthor ba	zarda not contributing to the	· Nono			
classifica	tion	. None.			
2.4.	Unknown acute toxicity (GHS US)				
Not appli	cable				
SECTI	ON 3: Composition/Information	on ingredients			
3.1.	Substances				
Substand	ce type	: Mono-constituent			
Name			Product identifier	%	GHS-US classification
Oxalic A (Main con	cid, Dihydrate Istituent)		(CAS-No.) 6153-56-6	100	Skin Corr. 1B, H314 Eye Dam. 1, H318
Full text	of hazard classes and H-statements : see	section 16			
3.2.	Mixtures				
Not appli	cable				
SECTI	ON 4: First-aid measures				
4.1.	Description of first aid measures				
First-aid	measures general	<ul> <li>Check the vital functions. Ur arrest: artificial respiration o with labored breathing: half- Vomiting: prevent asphyxia/ warming up). Keep watching physical strain. Depending of</li> </ul>	nconscious: maintain ad r oxygen. Cardiac arrest seated. Victim in shock: aspiration pneumonia. F g the victim. Give psycho on the victim's condition:	equate airw : perform re on his back Prevent cool ological aid. doctor/hos	ay and respiration. Respiratory esuscitation. Victim conscious with legs slightly raised. ling by covering the victim (no Keep the victim calm, avoid pital.
First-aid	measures after inhalation	: Remove the victim into fresh	n air. Respiratory proble	ms: consult	a doctor/medical service.
First-aid	measures after skin contact	: Wash immediately with lots to a doctor if irritation persis	of water. Do not apply (o	chemical) n	eutralizing agents. Take victim
First-aid	measures after eye contact	: Rinse immediately with plen ophthalmologist if irritation p	ty of water. Do not apply ersists.	y neutralizir	g agents. Take victim to an
First-aid	measures after ingestion	: Rinse mouth with water. Imr vomiting. Call Poison Inform service if you feel unwell. In administration of chemical a	nediately after ingestion ation Centre (www.big.b gestion of large quantitie ntidote. Doctor: gastric I	: give lots o be/antigif.htt es: immedia avage is no	f water to drink. Do not induce m). Consult a doctor/medical tely to hospital. Doctor: trecommended.
4.2.	Most important symptoms and effect	s (acute and delayed)			
Symptom	ns/effects after inhalation	: AFTER INHALATION OF D Irritation of the nasal mucou	UST: Dry/sore throat. Co s membranes. Nausea.	oughing. Irri Vomiting.	tation of the respiratory tract.
Sympton	ns/effects after skin contact	: Tingling/irritation of the skin. skin. Discolouration of the (f	FOLLOWING SYMPTC inger)nails.	OMS MAY A	PPEAR LATER: May stain the
Sympton	ns/effects after eye contact	: Irritation of the eye tissue. C tissue. Permanent eye dama	N CONTINUOUS EXPO age.	DSURE/CO	NTACT: Corrosion of the eye
Sympton	ns/effects after ingestion	: AFTER ABSORPTION OF L Nausea. Blood in vomit. Blo LATER: Decreased renal fur	ARGE QUANTITIES: B od in stool. Shock. FOLI nction. Change in urine	urns to the LOWING S` output. Cha	gastric/intestinal mucosa. YMPTOMS MAY APPEAR Inge in urine composition.
Chronic s	symptoms	: ON CONTINUOUS/REPEA the respiratory tract. Irritation rash/inflammation.	TED EXPOSURE/CONT n of the nasal mucous m	ACT: Decr nembranes.	eased renal function. Irritation of Coughing. Skin
4.3.	Immediate medical attention and spe	cial treatment, if necessary			
No additi	onal information available				
SECTI	ON 5: Fire-fighting measures				
5.1.	Suitable (and unsuitable) extinguishi	ng media			
Suitable	extinguishing media	· Preferably: water spray Pol	vvalent foam. Alcohol-re	sistant foar	n. ABC powder, Carbon dioxide.

Unsuitable extinguishing media	: No unsuitable extinguishing media known.
5.2. Specific hazards arising from the o	chemical
Fire hazard	DIRECT FIRE HAZARD. Non-flammable. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".

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5.3.	Special protective equipment and precautions for fire-fighters		
Precauti	onary measures fire :	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.	
Firefighti	ng instructions :	Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray.	
Protectio	n during firefighting :	Heat/fire exposure: compressed air/oxygen apparatus.	
SECTI	ON 6: Accidental release measu	ires	
6.1.	Personal precautions, protective equi	oment and emergency procedures	
6.1.1.	For non-emergency personnel		
Protectiv	e equipment :	Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. See "Material-Handling" to select protective clothing.	
Emerger	icy procedures :	Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.	
Measure	s in case of dust release :	In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.	
6.1.2.	For emergency responders		
Protectiv	e equipment :	Equip cleanup crew with proper protection.	
Emerger	cy procedures :	Ventilate area. Stop release.	
6.2.	Environmental precautions		
Prevent	entry to sewers and public waters.		
6.3.	6.3. Methods and material for containment and cleaning up		
For cont	ainment :	Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.	
Methods	for cleaning up :	Stop dust cloud by humidifying. Neutralize spill with quicklime or soda ash. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.	
6.4.	Reference to other sections		
No addit	ional information available		
SECTI	ON 7: Handling and storage		
7.1.	Precautions for safe handling		
Precauti	ons for safe handling :	Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Use corrosionproof equipment. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.	
Hygiene	measures :	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.	
7.2.	Conditions for safe storage, including	any incompatibilities	
Technica	Il measures :	Proper grounding procedures to avoid static electricity should be followed.	
Storage	conditions :	Protect from moisture. Keep container closed when not in use.	
Incompa	tible products :	Strong bases. metals. Acid chlorides.	

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Incompatible materials	: Heat sources.
Storage temperature	: 20 ℃
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. strong acids. (strong) bases. water/moisture.
Storage area	: Store at ambient temperature. Store in a dry area. Store in a dark area. Keep container in a well-ventilated place. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. watertight. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: synthetic material. MATERIAL TO AVOID: iron.

# SECTION 8: Exposure controls/personal protection

on outerparameters			
Oxalic Acid, Dihydrate (6153-56-6)			
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Oxalic acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)	
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (Oxalic acid; USA; Short time value; TLV - Adopted Value)	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>	
IDLH	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>	
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>	
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>	

### 8.2. Appropriate engineering controls

Appropriate engineering controls

Control noromoty

: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

### 8.3. Individual protection measures/Personal protective equipment

### Personal protective equipment:

Protective clothing. Safety glasses. Gloves. Face shield. Chemical resistant apron. Dust production: dust mask with filter type P2.



#### Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: butyl rubber. natural rubber. neoprene. nitrile rubber. viton. PVC. GIVE GOOD RESISTANCE: leather. chlorinated polyethylene. polyethylene. neoprene/natural rubber. GIVE LESS RESISTANCE: styrene-butadiene rubber. nitrile rubber/PVC. PVA

#### Hand protection:

Gloves

#### Eye protection:

Face shield. In case of dust production: protective goggles

### Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

#### **Respiratory protection:**

Dust production: dust mask with filter type P2

SECTIC	SECTION 9: Physical and chemical properties		
9.1.	Information on basic physical and ch	emical properties	
Physical s	state	: Solid	
Appearan	ce	: Crystalline solid. Powder. Grains.	

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Color	: Colourless or white
Odor	: Odorless
Odor threshold	: No data available
рН	: 1 (13 %)
pH solution	: 13 %
Melting point	: 101 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 22 hPa (50 °C)
Relative vapor density at 20 °C	: 4.3
Relative density	: 1.6
Specific gravity / density	: 1653 kg/m³
Molecular mass	: 126.07 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in glycerol. Water: 14 g/100ml Ethanol: 40 g/100ml
Log Pow	: -1.74 (Estimated value)
Auto-ignition temperature	: No data available
Decomposition temperature	: 157 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
9.2. Other information	
Saturation concentration	: 0.0015 g/m <sup>3</sup>
Other properties	: Hygroscopic. May sublimate. Substance has acid reaction.

# **SECTION 10: Stability and reactivity**

# 10.1. Reactivity

On heating: release of corrosive gases/vapours (formic acid). Upon combustion: CO and CO2 are formed. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases: release of heat. Decomposes on exposure to UV light: release of corrosive gases/vapours (formic acid).

10.2.	Chemical stability	
Unstable	on exposure to light. Hygroscopic.	
10.3.	Possibility of hazardous reactions	
None.		
10.4.	Conditions to avoid	
Incompati	ble materials. High temperature. Moisture	. Avoid dust formation.
10.5.	Incompatible materials	
Strong ox	idizers. Strong bases. metals. Acid chloric	les.
10.6.	Hazardous decomposition products	
Carbon m	ionoxide. Carbon dioxide.	
SECTIC	ON 11: Toxicological information	n
11.1.	Information on toxicological effects	
Likely rou	tes of exposure :	Inhalation; Skin and eye contact

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Oxalic Acid, Dihydrate (6153-56-6)	
LD50 oral rat	7500 mg/kg
LD50 dermal rat	20000 mg/kg
ATE US (oral)	7500 mg/kg body weight
ATE US (dermal)	20000 mg/kg body weight
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
	pH: 1 (13 %)
Serious eye damage/irritation	: Causes serious eye damage.
	pH: 1 (13 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity - single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Nausea. Vomiting.
Symptoms/effects after skin contact	: Tingling/irritation of the skin. FOLLOWING SYMPTOMS MAY APPEAR LATER: May stain the skin. Discolouration of the (finger)nails.
Symptoms/effects after eye contact	: Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	: AFTER ABSORPTION OF LARGE QUANTITIES: Burns to the gastric/intestinal mucosa. Nausea. Blood in vomit. Blood in stool. Shock. FOLLOWING SYMPTOMS MAY APPEAR LATER: Decreased renal function. Change in urine output. Change in urine composition.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Decreased renal function. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing. Skin rash/inflammation.
SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: Classification concerning the environment: not applicable.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Mild water pollutant (surface water). Ground water pollutant. Harmful to fishes. Slightly harmful to invertebrates (Daphnia) (EC50 (48h): 100 - 1000 mg/l). Slightly harmful to algae (EC50 (72h): 100 - 1000 mg/l). Slightly harmful to aquatic organisms (EC50 (48h): 100 - 1000 mg/l). pH shift.
Oxalic Acid, Dihydrate (6153-56-6)	
LC50 fish 1	34.1 mg/l (LC50; 96 h)
EC50 Daphnia 1	137 mg/l (EC50; 48 h)
12.2. Persistence and degradability	
Oxalic Acid, Dihydrate (6153-56-6)	
Persistence and degradability	Readily biodegradable in water. Readily biodegradable in water in anaerobic conditions. Photolysis in water. Biodegradable in the soil. Photolysis in the air.

Oxalic Acid, Dihydrate (6153-56-6)	
-1.74 (Estimated value)	
Bioaccumulation: not applicable.	

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

DOT Packaging Exceptions (49 CFR 173.xxx)

(49 CFR 173.27)

Other information

DOT Vessel Stowage Location

CFR 175.75)

DOT Quantity Limitations Passenger aircraft/rail : 15 kg

DOT Quantity Limitations Cargo aircraft only (49 : 50 kg

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section is exceeded.

: No supplementary information available.

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SECTION T3: Disposal consideratio	ins	
13.1.         Disposal methods           Waste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.	
Additional information	: LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC.	
Ecology - waste materials	: Avoid release to the environment.	
<b>SECTION 14: Transport information</b>	1	
Department of Transportation (DOT) In accordance with DOT Transport document description	: UN3261 Corrosive solid, acidic, organic, n.o.s., 8, II	
UN-No.(DOT) Proper Shipping Name (DOT) Transport hazard class(es) (DOT) Packing group (DOT) Hazard labels (DOT)	<ul> <li>: UN3261</li> <li>: Corrosive solid, acidic, organic, n.o.s.</li> <li>: 8 - Class 8 - Corrosive material 49 CFR 173.136</li> <li>: II - Medium Danger</li> <li>: 8 - Corrosive</li> </ul>	
DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Symbols DOT Special Provisions (49 CFR 172.102)	<ul> <li>212</li> <li>240</li> <li>G - Identifies PSN requiring a technical name</li> <li>IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).</li> <li>IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle.</li> <li>IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner.</li> <li>T3 - 2.65 178.274(d)(2) Normal</li></ul>	

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

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SECTION 15: Regulatory information			
15.1. US Federal regulations			
Oxalic Acid, Dihydrate (6153-56-6)			
Not listed on the United States TSCA (Toxic Substances Control Act) inventory			
All components of this product are listed, or excluded from Substances Control Act (TSCA) inventory except for:	listing, on the United States Environment	tal Protection Agency Toxic	
Oxalic Acid, Dihydrate	CAS-No. 6153-56-6	100%	

# 15.2. International regulations

#### CANADA

No additional information available

#### **EU-Regulations**

No additional information available

#### **National regulations**

No additional information available

# 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information		
Revision date	: 01/16/2018	
Full text of H-phrases: see section 16:		
H314	Causes severe skin burns and eye damage	
H318	Causes serious eye damage	
NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.	
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.	
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.	
Hazard Rating		
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given	
Flammability	: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)	
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.	
Personal protection	: F	
	F - Safety glasses, Gloves, Synthetic apron, Dust respirator	

### SDS US Dawnsci

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