Storage Temperature	No information available.
Storage Life	No information available.
Specific use	No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures.

Occupational Exposure Limits –

Chemical Name:	Long Term Exposure 8 hr TWA, mg/m-3	Short term exposure 15 Min mg/rn-3	Reference
Oxalic acid	1.0	2.0	EH40

8.1.2 PNECs and DNELs
DNELs - Health;

PNEC/PEC – Ennvironment

Compartment	PNEC
Aquatic PNECaqua – freshwater (mg/l)	0.1622 mg/L
PNECaqua - marine water (mg/l)	0.01622 mg/L
PNECfreshwater-sediment (mg/kg d.w.)	Can not be derived
The PNECmarine-sediment mg/kg d.w.	Can not be derived
Terrestrial (PNECsoil mg/kg d.w.)	Can not be derived
Sewage treatment plant PNEC STP (mg/l)	1550 mg/L
Atmospheric Compartment	Not applicable

8.1 Respirators — Ensure adequate ventilation. Wear suitable respiratory protective equipment if exposure to high levels of material are likely.

8.2 Eye Protection — Goggles giving complete protection to eyes.. Ensure eye wash and showers are in the proximity to work-station location.

8.3 Gloves — Plastic, rubber or leather.gloves

8.4 Other — Wear suitable protective clothing as protection against splashing or contamination.

8.5 Environmental precautions — Do not allow to enter drains, sewers or watercourses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Solid.
Colour	White.
Odour	Odourless.
Boiling Point (°C)	149-160°C
Melting Point (°C)	101 °C .
Viscosity	Not applicable.
Flash point Closed cup]	Not flammable
Self-ignition temperature	400 °C at 1013 hPa
Specific Gravity	1.65
Bulk Density	0.9 kg/l
Relative density	0.813 at 20°C
Vapour Pressure (mm Hg)	Not explosive

Explosive properties	
Solubility (Water)	108 g/L at 25 °C
Oxidising properties	Not an oxidiser
Partition coefficient n-octanol/ water (logvalue)	1.7 at 23 °C
Vapour pressure	0.0312 Pa at 25 °C

10. STABILITY AND REACTIVITY

10.1 Chemical Stability	Stable under normal conditions.
10.2 Conditions to avoid	Do not allow contact with air.
10.3 Materials to avoid	Keep away from oxidising agents., bases, Ammonia, silver compounds
10.4 Hazardous Decomposition Product(s)	No information available.

11. TOXICOLOGICAL INFORMATION

Toxicity	Oral LD50 (rat) 375 mg/kg bw Dermal: 20000 mg/kg bw Inhalation: no data
Skin Contact	May cause irritation.
Eye Contact	Corrosive. Category 1 (irreversible effects on the eye)
Sensitisation	Not a sensitiser
Carcinogenicity	None known
Mutagenicity	. None known.
Reproductive toxicity	Not a reproductive toxin

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution	No information available.
Persistence and Degradation	The product has low potential for bioaccumulation.
Toxicity	Fish LC 50 96 hr: 162.2 mg/L Daphnia LC 50 48 hr: 61 mg/L
Biodegradability.	
Results of a PBT/vBvP assessment	Readily biodegradable Not a PBT or vPvB

13. DISPOSAL CONSIDERATIONS

13.1 Regulatory information	Do not allow to enter drains, sewers or watercourses. Disposal should be in accordance with local, state or national legislation.
13.2 Recommended:	No information available

14. TRANSPORT INFORMATION

	IATA	IMO	RID/ADR
Shipping Name:	Not regulated.	Not regulated.	Not regulated.

15. REGULATORY INFORMATION

Classification and labelling according to CLP / GHS
Signal word: Danger
Hazard pictograms:

GHS07: exclamation mark

GHS05: corrosion

Hazard statements:

H312: Harmful in contact with skin.
H302: Harmful if swallowed.
H318: Causes serious eye damage.

Precautionary phrases:

P102 Keep out of reach of children
P262 Do not get in eyes, on skin, or on clothing.
P305+P351+ P338+ P313: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

INTERNATIONAL INVENTORIES

EINECS (Europe)	Listed

16 OTHER INFORMATION

References: Chemical Safety Report for Oxalic acid
Directive. 67/548/EEC
Regulation 1272/2009 (CLP)
Occupational Exposure Limits (EH40)

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Annex I Exposure scenarios

Note: This sections structure and sub-headings are optimised to suit customers uses

1. Title

Free short title	Professional use of solid oxalic acid
ES number	4
Systematic title based on use descriptor	SU22, SU6a, SU18 PC9a, PC14, PC15, PC25, PC35, PC31 PROC10, PROC11, PROC15, PROC21 ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f
Processes, tasks and/or activities covered	Processes, tasks and/or activities covered are described in Section 2 below.
Assessment Method	The assessment of inhalation, dermal and environmental exposure and is based on ECETOC TRA.

2. Operational conditions and risk management measures

PROC	REACH definition	Involved tasks
PROC10	Roller application or brushing	Further information is provided in the ECHA Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor
PROC11	Non industrial spraying	
PROC15	Use as laboratory reagent	

PROC21	Low energy manipulation of substances bound in materials and/or articles	system (ECHA-2010-G-05-EN, 26/03/2010).
ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f	Wide dispersive indoor and outdoor use of reactive substances or processing aids in open systems	

2.1 Control of workers exposure

Product characteristics

PROC	Used in preparation?	Content in preparation	Emission potential
All applicable PROCs	Not excluded	>25% w/w (not restricted)	Low

Amounts used

The actual tonnage handled per shift is not considered to influence the exposure as such for this scenario. Instead, the combination of the scale of operation, (industrial vs. professional) and level of containment/automation (as reflected in the PROC) is the main determinant of the process intrinsic emission potential.

Frequency and duration of use/exposure

All applicable PROCs > 4 hours (not restricted)

Technical conditions and measures at process level (source) to prevent release

Risk management measures at the process level (e.g. containment or segregation of the emission source) are generally not required in the processes.

Technical conditions and measures to control dispersion from source towards the worker

PROC	Level of separation	Localised controls (LC)	Efficiency of LC (according to ECTOC TRA)	Further information
All applicable PROCs	Separation of workers is generally not required in the processes, unless a specific process step is conducted less than full-shift. If that is the case, it has to be guaranteed that the worker is separated from the emission source for the remaining shift.	local exhaust ventilation	N/A	--

Organisational measures to prevent /limit releases, dispersion and exposure

Avoid inhalation or ingestion. General occupational hygiene measures are required to ensure a safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no eating and smoking at the workplace, the wearing of standard working clothes and shoes unless otherwise stated below. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home. Do not blow dust off with compressed air.

Annex II. Use descriptors for Oxalic acid

Add table relvant to the customers uses

MUDANJIANG FENGDA CHEMICALS IMP. & EXP. CORP.

Chemicals Incorporated
270 Osborne Drive
Fairfield, OH 45014-2246
(513) 682-2000

SAFETY DATA SHEET

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

Chemical Name OXALIC ACID

Trade name

Details of the supplier of the Safety Data Sheet
Mudanjiang Fengda Chemicals Imp. & Exp. Corp.
No. 167 Aimin street, Xian district, Mudanjiang Heilongjiang, China

Telephone: 86-453-6297887
Fax 86-453-6223551
E-mail: fengda@mudanjiangchem.com

Emergency Phone No.: 86-453-6297887 (contact XIE YUMIN)
(QUESTION - is this a 24 hour contact emergency tel ephone No)

REACH Registration No.
Use of Substance / Preparation: In Metallurgy industry as precipitating and separating agent. Used in the pharmaceutical industry Used as polishish a, rust-remover, cleaning and bleacging agent and the processing of leather, wood, and aluminium products etc; as reducing agent for dyeing and printing; as bleaching agent for textiles; a substitute for acetic acid, as coloring mordant for fast pigment dyestuff. Used in the manufacture of urea-formaldehyde, Butadiene catalyst, etc, porcelain capacitorsand a detergent

2. HAZARDS IDENTIFICATION

2.1 Substances
EC Classification according to Regulation 1272/2008 (CLP)

Hazardous ingredient(s)	%W/W	EC No.	Hazard pictogram(s)	Hazard statement(s)
Oxalic acid	99.6% min	205-643-3	 Danger (GHS 07)  Corrosion (GHS 05)	H312; H302; H318

EC Classification According to Directive . 67/548/EEC

Hazardous ingredient(s)	%W/W	EC No.
Oxalic acid	99.6% min	205-643-3

2.2 Additional Information
OXALIC ACID" is Harmful if swallowed and must be included in Acute oral toxicity CATEGORY 4. CLP dated December 16th, 2008.

For full text of H/P phrases see section 16mber 16th, 2008, "

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1

Composition	%W/W	EC No.	Cas No	REACH Registration No.
Oxalic acid	99.6% min	205-643-3	114-62-7	
Sulfuric acid	0.15			

Note - Please confirm presence of sulfuric acid this information comes from the CSR

4. FIRST AID MEASURES

• 4.1 Inhalation	Irritant. Remove from exposure. Apply artificial respiration if patient is not breathing. If breathing is laboured, oxygen should be administered by qualified personnel. If symptoms persist, obtain medical attention.
• 4.2 Skin Contact	Irritant. Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water. Continue to wash the affected area for at least 15 minutes. If symptoms persist, obtain medical attention.
4.3 Eye Contact	Corrosive. Flush eyes with water for at least 15 minutes. ith plenty of water or eye wash solution while lifting the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain immediate medical attention.
4.4 Ingestion	Irritant. 5 gms can be fatal. Give plenty of water to drink. **Do not** induce vomiting. Obtain immediate medical attention.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media	Extinguish with water spray, dry chemical or carbon dioxide.
5.2 Unsuitable Extinguishing Media	No information available.
5.3 Fire Fighting Protective Equipment	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.
5.4 Hazardous Decomposition Product(s)	Toxic and corrosive gases may be formed. Carbon monoxide (CO). Formic acid.
5.5 Other	If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions. Keep containers cool by spraying with water if exposed to fire. Keep public away from affected area .

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions	Ensure suitable personal protection (including respiratory protection) during removal of spillages. See Section: 8. Keep away from heat, sparks, open flame, hot surfaces - No smoking
6.2 Environmental Exposure Controls	Do not allow to enter drains, sewers or watercourses.
6.3 Methods for cleaning up	Small Spillages: Contain spillages with sand. Large Spillages: Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery.Dispose of this material and its container to hazardous or special waste collection point. Caution - spillages may be slippery. Keep public away from danger area.

7. HANDLING AND STORAGE

7.1 Handling	Ensure adequate ventilation. Avoid generation of dust. Wear appropriate personal protective equipment, avoid direct contact. Do not eat, drink or smoke at the work place. Take precautionary measures against static discharge.
7.2 Storage	Store and handle in accordance with all current regulations and standards. Keep only in the original container. Keep away from heat and sources of ignition. Keep away from incompatible materials