

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date 01.05.2026

Revision: 01.05.2016

1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** 2026 Rusteez
- **Article number:** 5014
- **Application of the substance / the preparation** Cleaning of metals melts
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Genesis Chemical
4626 Eagle Falls Pl
Tampa FL 33619
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585



2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 2 H310 Fatal in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.



C; Corrosive

R35: Causes severe burns.

- **Information concerning particular hazards for human and environment:**

Acid burns have to be treated immediately, as it may otherwise cause badly curing wounds.

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05 GHS06

Signal word Danger

Hazard-determining components of labelling:

sulphuric acid
ammonium bifluoride
hydrofluoric acid

Hazard statements

H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H331 Toxic if inhaled.
H314 Causes severe skin burns and eye damage.
4,5 percent of the mixture consists of ingredient(s) of unknown toxicity.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P361 Remove/Take off immediately all contaminated clothing.
P321 Specific treatment (see on this label).
P311 Call a POISON CENTER or doctor/physician.
P322 Specific measures (see on this label).
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P330 Rinse mouth.
P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Hazard description:**
- **WHMIS-symbols:**
 - D1A - Very toxic material causing immediate and serious toxic effects
 - D2B - Toxic material causing other toxic effects
 - E - Corrosive material



- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8	sulphuric acid C R35 Skin Corr. 1A, H314	10-25%
CAS: 1341-49-7 EINECS: 215-676-4 Index number: 009-009-00-4	ammonium bifluoride T R25; C R34 Acute Tox. 3, H301 Skin Corr. 1B, H314	2,5-10%
CAS: 7664-39-3 EINECS: 231-634-8 Index number: 009-002-00-6	hydrofluoric acid T+ R26/27/28; C R35 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 Skin Corr. 1A, H314	2,5-10%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

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4 First aid measures

· 4.1 Description of first aid measures

· General information:

Medical supervision for at least 48 hours.

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Do not use mouth to mouth or mouth to nose resuscitation.

Use a respiratory bag or breathing device.

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Call a doctor immediately.

Rub in Ca-gluconate solution or Ca-gluconate gel immediately.

Immediately wash with water and soap and rinse thoroughly.

· After eye contact:

Call a doctor immediately.

Rinse opened eye for several minutes under running water. Then consult a doctor.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Do not induce vomiting; call for medical help immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

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

Gastric or intestinal disorders

Dizziness

Headache

Breathing difficulty

· Hazards

Danger of circulatory collapse.

Danger of disturbed cardiac rhythm.

Danger of gastric perforation.

· 4.3 Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours.

5 Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· 5.2 Special hazards arising from the substance or mixture

No further relevant information available.

· 5.3 Advice for firefighters

· Protective equipment:

Mouth respiratory protective device.

· Additional information

Cool endangered receptacles with water spray.

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6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling**

Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- **Information about fire - and explosion protection:** Keep respiratory protective device available.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Use receptacles with fluoroplastic lining.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- **Further information about storage conditions:**

Store receptacle in a well ventilated area.

Keep container tightly sealed.

- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

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· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

7664-93-9 sulphuric acid

PEL (USA)	1 mg/m ³
REL (USA)	1 mg/m ³
TLV (USA)	0,2* mg/m ³ *as thoracic fraction
EL (Canada)	0,2 mg/m ³ ACGIH A2; IARC 1
EV (Canada)	0,2 mg/m ³

7664-39-3 hydrofluoric acid

IOELV (EU)	Short-term value: 2,5 mg/m ³ , 3 ppm Long-term value: 1,5 mg/m ³ , 1,8 ppm
PEL (USA)	3 ppm as F
REL (USA)	Short-term value: C 5* mg/m ³ , C 6* ppm Long-term value: 2,5 mg/m ³ , 3 ppm *15-min, as F
TLV (USA)	Short-term value: C 1,64 mg/m ³ , C 2 ppm Long-term value: 0,41 mg/m ³ , 0,5 ppm as F; Skin
EL (Canada)	Short-term value: C 2 ppm
EV (Canada)	0,5 ppm as F

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**

Fluorocarbon rubber (Viton)

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Not suitable are gloves made of the following materials:**

Nitrile rubber, NBR

Natural rubber, NR

- **Eye protection:**



Tightly sealed goggles

- **Body protection:**

Use protective suit.

Boots

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:

Liquid

Colour:

Pink

- **Odour:**

Pungent

- **Odour threshold:**

Not determined.

- **pH-value at 20°C:**

1,5

- **Change in condition**

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

100°C

- **Flash point:**

Not applicable.

- **Flammability (solid, gaseous):**

Not applicable.

- **Ignition temperature:**

Decomposition temperature:

Not determined.

- **Self-igniting:**

Product is not selfigniting.

- **Danger of explosion:**

Product does not present an explosion hazard.

- **Explosion limits:**

Lower:

Not determined.

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Upper:	Not determined.
· Vapour pressure at 20°C:	23 hPa
· Density at 20°C:	1,04 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0,0 %
Water:	68,5 %
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with base metals forming hydrogen.
Reacts with organic substances.
Reacts with alkali (lyes).
Reacts with various metals.
Reacts with amines.
Corrosive action on metals.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Hydrogen fluoride
Sulphur dioxide
Hydrogen cyanide (prussic acid)
Poisonous gases/vapours
Corrosive gases/vapours

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11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values relevant for classification:
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7664-39-3 hydrofluoric acid

Oral	LD50	1276 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** After neutralization a reduction of the harming action may be recognized
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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13 Disposal considerations

13.1 Waste treatment methods

Recommendation

Dilute concentrate with water and neutralize afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation:

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Recommended cleansing agents:

Water, if necessary together with cleansing agents.

14 Transport information

14.1 UN-Number

DOT, ADR, IMDG, IATA

UN2922

14.2 UN proper shipping name

DOT, IMDG, IATA

CORROSIVE LIQUID, TOXIC, N.O.S.
(HYDROFLUORIC ACID, AMMONIUM
HYDROGENDIFLUORIDE)

ADR

2922 CORROSIVE LIQUID, TOXIC, N.O.S.
(HYDROFLUORIC ACID, AMMONIUM
HYDROGENDIFLUORIDE)

14.3 Transport hazard class(es)

DOT



Class

8 Corrosive substances.

Label

8+6.1

ADR



Class

8 (CT1) Corrosive substances.

Label

8+6.1

IMDG, IATA



Class

8 Corrosive substances.

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· Label	8+6.1
· 14.4 Packing group · DOT, ADR, IMDG, IATA	II
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups	Warning: Corrosive substances. 86 F-A,S-B Acids
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Tunnel restriction code	E
· UN "Model Regulation":	UN2922, CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, AMMONIUM HYDROGENDIFLUORIDE), 8 (6.1), II

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

- **Section 355 (extremely hazardous substances):**

7664-93-9	sulphuric acid
7664-39-3	hydrofluoric acid

- **Section 313 (Specific toxic chemical listings):**

7664-93-9	sulphuric acid
7664-39-3	hydrofluoric acid

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65 (California):**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

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· Chemicals known to cause developmental toxicity:		
None of the ingredients is listed.		
· Carcinogenic Categories		
· EPA (Environmental Protection Agency)		
None of the ingredients is listed.		
· IARC (International Agency for Research on Cancer)		
7664-93-9	sulphuric acid	1
· NTP (National Toxicology Program)		
7664-93-9	sulphuric acid	K
· TLV (Threshold Limit Value established by ACGIH)		
7664-93-9	sulphuric acid	A2
1341-49-7	ammonium bifluoride	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		
· Canada		
· Canadian Domestic Substances List (DSL)		
All ingredients are listed.		
· Canadian Ingredient Disclosure list (limit 0.1%)		
None of the ingredients is listed.		
· Canadian Ingredient Disclosure list (limit 1%)		
7664-93-9	sulphuric acid	
7664-39-3	hydrofluoric acid	
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.		

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H300 Fatal if swallowed.

H301 Toxic if swallowed.

H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

R25 Toxic if swallowed.

R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R35 Causes severe burns.

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Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent