

SAFETY DATA SHEET

C1022 Carbon Steel Fasteners with 1000/hr Ruspert Coating (Self-Drilling / Self-Tapping Screws) | OSHA HCS 2012 / GHS Rev. 8

SECTION 1 - IDENTIFICATION	
Product name	C1022 Carbon Steel Fasteners with Ruspert Coating (Self-Drilling / Self-Tapping Screws)
CAS number	Mixture (Manufactured Article)
SDS number	3GEN-SDS-RUSPERT-001
Recommended use	Industrial, structural, roofing, masonry, and construction fastening applications.
Restrictions on use	No specific restrictions for intended industrial uses.
Manufacturer / supplier	3GEN Masonry Products, Inc. Plant / operations: 8620 Spruiell Street NE, Leeds, Alabama 35094 USA Correspondence: 8528 Davis Blvd., Unit 134-246, North Richland Hills, Texas 76182 USA
Telephone	Toll-free 1-800-556-5785 www.3genmp.com
Emergency (24-hour)	CHEMTREC 1-800-424-9300 (US/Canada) +1-703-527-3887 (international)
Issue / revision date	7 September 2026 Version 1.0
SECTION 2 - HAZARD(S) IDENTIFICATION	

GHS Classification: Not classified as a hazardous chemical under GHS in its intact solid manufactured form.

Signal word	None required.
Hazard statements	None required for product as shipped.
Precautionary statements	Prevention: Wear cut-resistant work gloves and safety glasses during manual handling. Response: Wash hands thoroughly after handling.
Hazards not otherwise classified (HNOC)	Solid fasteners pose no health or physical hazards under normal handling. Mechanical processes such as grinding, cutting, or welding may generate airborne metal dust or fumes containing iron, zinc, or aluminum oxides, which may cause eye, skin, or respiratory irritation.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

This product is a solid metallic fastener composed of a C1022 carbon steel core with a multi-layer Ruspert (zinc-aluminum/ceramic organic) corrosion barrier finish.

Chemical / Component Name	CAS Number	Weight Percentage (%)
Base Metal: C1022 Carbon Steel		
Iron (Fe)	7439-89-6	> 97.0%
Carbon (C)	7440-44-0	0.18% - 0.23%
Manganese (Mn)	7439-96-5	0.70% - 1.00%
Phosphorus (P)	7723-14-0	<= 0.030%
Sulfur (S)	7704-34-9	<= 0.035%
Surface Finish: Ruspert Coating		
Zinc (Electroplated Base Layer)	7440-66-6	< 1.5%
Chemical Conversion Layer (Passivation)	Mixture	< 0.5%
Ceramic / Aluminum Organic Topcoat	Mixture	< 1.0%

SECTION 4 - FIRST-AID MEASURES	
Inhalation	Unlikely under normal assembly. If airborne dust or fumes from grinding/welding cause discomfort, move subject to fresh air. Seek medical attention if irritation persists.
Skin contact	Wash hands with soap and water after handling. Treat sharp point/thread punctures or mechanical cuts with standard first aid.
Eye contact	If metal particles or dust enter eyes, flush immediately with clean water for at least 15 minutes while holding eyelids open. Do not rub eyes.
Ingestion	Unlikely route of exposure. Ingestion of small parts may pose a mechanical choking hazard.

SECTION 5 - FIRE-FIGHTING MEASURES

Suitable extinguishing media	Solid metal is non-flammable. Use extinguishing media appropriate for surrounding fire (water spray, dry chemical, CO ₂ , foam).
Unsuitable extinguishing media	Do not use direct water stream on molten metal.
Specific hazards	Solid fasteners do not ignite. High heat from fire may generate localized metal fumes (iron oxide, zinc oxide).
Protective equipment	Wear full protective turnout gear and self-contained breathing apparatus (SCBA).

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear protective gloves to prevent mechanical cuts or sharp-edge punctures.
Environmental precautions	Prevent spilled loose fasteners from entering storm drains or waterways.
Clean-up methods	Sweep, vacuum, or collect dropped fasteners using mechanical tools or magnets. Place in suitable containers for reuse or scrap metal recycling.

SECTION 7 - HANDLING AND STORAGE

Handling	Wear cut-resistant or heavy leather work gloves. Avoid operations such as high-speed dry grinding that create airborne dust without adequate local exhaust.
Storage	Store in a dry, covered, and ventilated area away from strong mineral acids to preserve coating integrity.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**Occupational Exposure Limits (during airborne processing such as welding or grinding):**

Substance	OSHA PEL	ACGIH TLV
Iron Oxide Fume	10 mg/m ³	5 mg/m ³
Manganese Dust/Fume	5 mg/m ³ (Ceiling)	0.02 mg/m ³
Zinc Oxide Fume	5 mg/m ³	2 mg/m ³
Eye protection	Safety glasses with side shields (ANSI Z87.1 approved).	
Hand protection	Cut-resistant industrial work gloves.	
Respiratory protection	Not required for normal assembly. Use N95 respirator if grinding dust exceeds occupational exposure limits.	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid metallic fasteners (Silver/Grey Ruspert)
Odor	Odorless
pH	Not applicable
Melting point	Base steel: approximately 1420 C - 1540 C
Flash point	Non-flammable
Relative density	Approximately 7.85 g/cm ³
Solubility	Insoluble in water
Decomposition temperature	Organic layer > 300 C

SECTION 10 - STABILITY AND REACTIVITY

Chemical stability	Stable under normal storage and usage conditions.
Incompatible materials	Strong mineral acids (e.g., hydrochloric acid, sulfuric acid) and strong oxidizers.
Hazardous decomposition products	Thermal decomposition during high-heat welding may release iron oxide and zinc oxide fumes.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity	Non-toxic in solid manufactured form.
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Carcinogenicity	None of the components in C1022 steel or Ruspert coating are listed as carcinogens by IARC, NTP, ACGIH, or OSHA.
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SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Non-hazardous solid metal. Ruspert coating provides durable barrier protection against rust.
Persistence / degradability	Metal substrate is non-biodegradable; 100% recyclable.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste status	Non-hazardous scrap metal.
Disposal method	Recyclable. Collect unused or scrap fasteners and send to an authorized scrap metal recycling facility.

SECTION 14 - TRANSPORT INFORMATION

Regulation Mode	UN Number	Proper Shipping Name	Hazard Class
US DOT (Road)	Not Regulated	Metallic Fasteners (Non-Hazardous)	None
IMDG (Sea)	Not Regulated	Metallic Fasteners (Non-Hazardous)	None
IATA / ICAO (Air)	Not Regulated	Metallic Fasteners (Non-Hazardous)	None

SECTION 15 - REGULATORY INFORMATION

TSCA Status: All chemical components are listed on the TSCA Inventory.

EU RoHS Compliance: Compliant. Ruspert finish is free of Hexavalent Chromium (Cr6+), Lead (Pb), Mercury (Hg), and Cadmium (Cd).

EU REACH Regulation: SVHC Candidate List Content < 0.1% w/w.

SECTION 16 - OTHER INFORMATION

NFPA rating	Health: 0 Flammability: 0 Instability: 0
HMIS rating	Health: 0 Flammability: 0 Physical Hazard: 0 PPE: B

Disclaimer: The information provided in this SDS is correct to the best of our knowledge at the date of publication. It is intended as standard safety guidance for handling, storage, transport, and disposal.

The information is believed to be correct as of the revision date but does not purport to be all-inclusive and shall be used only as a guide. 3GEN Masonry Products, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product except as required by applicable law. Users must satisfy themselves that the product is suitable for their intended use and that they comply with all applicable occupational-safety, environmental, transportation, and building-code requirements.

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