SAFETY DATA SHEET

1. Identification

Product identifier	**Stainless Weld Heat Tint Remover**
Other means of identification	Not available.
Recommended use	Stainless weld chromium oxide and heat tint remover
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Protocol Environmental Solutions Inc.
Address	105B 81 Golden Drive Coquitlam, BC V3K 6R2 Canada
Telephone	604-464-0660
E-mail	Not available.

Distributed by	Praxiar, Inc. 39 Old Ridgebury Rd Danbury, CT 06810-5100 US
On-site Emergency	1-800-645-4633
Emergency phone number	Chemtrec 1-800-424-9300

2. Hazard(s) identification

Physical hazards	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	
Health hazards	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	
OSHA defined hazards	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	

Label elements

Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation.

Precautionary statement

Prevention	Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Other hazards which do not result in classification:
Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. In extreme cases, tooth erosion could result.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alumina Hydrate	Aluminium hydroxide	21645-51-2	15 - 30
NITRIC ACID	Hydrogen nitrate	7697-37-2	10 - 16
Magnesium Fluoride	Magnesium difluoride	7783-40-6	5 - 10
Magnesium Nitrate	Magnesium Dinitrate Magnesium dinitrate hexahydrate	10377-60-3	5 - 10

The exact concentrations of the above listed chemicals are being withheld as a trade secret as allowed by 29CFR1910.1200.

4. First-aid measures

Inhalation If inhaled: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Get medical attention immediately.

Skin contact IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Duration of rinsing should be at least 15 minutes. Get medical attention immediately. Wash contaminated clothing before reuse.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Duration of rinsing should be at least 15 minutes. Get medical attention immediately.

Ingestion Rinse mouth. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Seek immediate medical attention/advice.

Most important symptoms/effects, acute and delayed Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Symptoms may include redness, blistering, pain and swelling. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause severe irritation to the nose, throat, and respiratory tract. Symptoms may include coughing, choking and wheezing. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Ventilate the contaminated area. Use water spray to cool unopened containers. Move containers from fire area if you can do so without risk. Do not scatter spilled material with high pressure water streams. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Specific methods Cool containers exposed to flames with water until well after the fire is out.

General fire hazards No unusual fire or explosion hazards noted.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx). Chlorine.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Ventilate the contaminated area. Evacuate area. Cover any spilled material with non-combustible absorbent material, such as vermiculite or sand, then place absorbent material into a container for later disposal. Neutralize the spilled material before disposal. Contaminated absorbent material may pose the same hazards as the spilled product. Prevent entry into waterways, sewer, basements or confined areas.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Avoid breathing mist or vapor. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep containers tightly closed in a dry, cool and well-ventilated place. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Magnesium Fluoride (CAS 7783-40-6)	PEL	2.5 mg/m3
NITRIC ACID (CAS 7697-37-2)	PEL	5 mg/m3
		2 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value	Form
Magnesium Fluoride (CAS 7783-40-6)	TWA	2.5 mg/m3	Dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Alumina Hydrate (CAS 21645-51-2)	TWA	1 mg/m3	Respirable fraction.
Magnesium Fluoride (CAS 7783-40-6)	TWA	2.5 mg/m3	
NITRIC ACID (CAS 7697-37-2)	STEL	4 ppm	
	TWA	2 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Magnesium Fluoride (CAS 7783-40-6)	TWA	2.5 mg/m3
NITRIC ACID (CAS 7697-37-2)	STEL	10 mg/m3
		4 ppm
	TWA	5 mg/m3
		2 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Magnesium Fluoride (CAS 7783-40-6)	3 mg/l	Fluoride	Urine	*
	2 mg/l	Fluoride	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Occupational Exposure Limits are not relevant to the current physical form of the product.

Appropriate engineering controls	General ventilation normally adequate. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). A full face shield may also be necessary. An eyewash station should be made available in the immediate working area.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves such as Neoprene or Nitrile. Advice should be sought from glove suppliers.
Other	Wear suitable clothing such as coveralls.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Advice should be sought from respiratory protection specialists.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Paste.
Physical state	Solid.
Form	Semi-liquid.
Color	Off-white
Odor	Slight.
Odor threshold	Not available.
pH	acidic
Melting point/freezing point	32 °F (0 °C)
Initial boiling point and boiling range	> 212 °F (> 100 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	10.88 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	80000 - 150000 cP

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Avoid heat, sparks, open flames and other ignition sources. Do not use in areas without adequate ventilation.
Incompatible materials	Strong oxidizing agents. Cyanides. Peroxides. Alcohols. Alkalies.
Hazardous decomposition products	May attack light-alloy metals and liberate hydrogen gas. Refer to hazardous combustion products in Section 5.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause severe irritation to the nose, throat, and respiratory tract.
Skin contact	Causes skin burns.
Eye contact	Causes eye burns.
Ingestion	May cause severe irritation and corrosive damage in the mouth, throat and stomach.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Symptoms may include redness, blistering, pain and swelling. Direct contact with concentrated solutions may be corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause severe irritation to the nose, throat, and respiratory tract. Symptoms may include coughing, choking and wheezing. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.

Information on toxicological effects

Acute toxicity This product is not classified as an acute toxicity hazard.
See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Alumina Hydrate (CAS 21645-51-2)		
Acute		
Dermal		
LD50	Rabbit	No data in literature
Inhalation		
LC50	Rat	No data in literature
Oral		
LD50	Rat	> 5000 mg/kg
Magnesium Fluoride (CAS 7783-40-6)		
Acute		
Dermal		
LD50	Rabbit	No data in literature
Inhalation		
LC50	Rat	No data in literature
Oral		
LD50	Rat	2330 mg/kg
Magnesium Nitrate (CAS 10377-60-3)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Inhalation		
LC50	Rat	No data in literature
Oral		
LD50	Rat	> 2000 mg/kg
NITRIC ACID (CAS 7697-37-2)		
Acute		
Dermal		
LC50	Rabbit	No Data in Literature

Components	Species	Test Results
Inhalation		
LC50	Rat	No data in literature
Oral		
LD50	Rat	No Data in Literature

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin burns.

Serious eye damage/eye irritation Causes eye burns.

Respiratory or skin sensitization

Respiratory sensitization This product is not expected to cause respiratory sensitization.

Skin sensitizer This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity No components present at greater than 0.1% are considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Magnesium Fluoride (CAS 7783-40-6) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Specific Target Organ Toxicity (STOT), Single Exposure: Category 3
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified as a specific target organ toxicity -repeated exposure.

Aspiration toxicity Not expected to be an aspiration hazard.

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. In extreme cases, tooth erosion could result.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Magnesium Nitrate (CAS 10377-60-3)			
Aquatic			
Acute			
Fish	LC50	Guppy (Poecilia reticulata)	1378 mg/l, 96 hours (potassium nitrate, KNO3/L)

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8. Dispose of contents/container in accordance with local/ regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, Magnesium Nitrate)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (NITRIC ACID, Magnesium Nitrate)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, Magnesium Nitrate)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

DOT

IATA; IMDG

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

NITRIC ACID (CAS 7697-37-2) Listed.

SARA 304 Emergency release notification

NITRIC ACID (CAS 7697-37-2) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
NITRIC ACID	7697-37-2	1000	1000 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
NITRIC ACID	7697-37-2	10 - 16
Magnesium Nitrate	10377-60-3	5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

NITRIC ACID (CAS 7697-37-2)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Magnesium Nitrate (CAS 10377-60-3)
NITRIC ACID (CAS 7697-37-2)

US. New Jersey Worker and Community Right-to-Know Act

Magnesium Fluoride (CAS 7783-40-6)
Magnesium Nitrate (CAS 10377-60-3)
NITRIC ACID (CAS 7697-37-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Magnesium Fluoride (CAS 7783-40-6)

Magnesium Nitrate (CAS 10377-60-3)
NITRIC ACID (CAS 7697-37-2)

US. Rhode Island RTK

Magnesium Nitrate (CAS 10377-60-3)
NITRIC ACID (CAS 7697-37-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 10-07-2014

Version # 01

Disclaimer

Prepared by: ICC The Compliance Center Inc.
http://www.thecompliancecenter.com

Disclaimer
This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Protocol Environmental Solutions Inc. and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Protocol Environmental Solutions Inc. expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Protocol Environmental Solutions Inc. The information in the sheet was written based on the best knowledge and experience currently available.

Bibliography Not available.