SHARK GEL

SAFETY DATA SHEET

ACCORDING TO USA FEDERAL HAZCOM 012

1. IDENTIFICATION

1.1. Product Identifier

Code:	A-RUST
Product name	**SHARK GEL**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use	***Multi-surface gel formulated rust and oxidation cleaner. For professional use only.***

1.3. Details of the supplier of the safety data sheet

Name	**Armus LLC**
Full address	**137 Grand Street 3rd Floor**
	New York, NY 10013
Country	**United States**
	Tel. (+1) 917-957-5383
E-mail address of the competent person responsible for the Safety Data Sheet	bill@armussolutions.com

1.4. Emergency telephone number

For urgent inquiries refer to	**Tel. (+1) 917-957-5383 United States**

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment is given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Skin corrosion, category 1	Causes severe skin burns and eye damage
Serious eye damage, category 1	Causes serious eye damage

Hazard pictograms:

Signal words: **DANGER**

Hazard statements:

H314	Causes severe skin burns and eye damage.

Precautionary statements:

Prevention:

P280	Wear protective gloves / eye protection / face protection.
P260	Do not breath fume, mist, or spray
P264	Wash with plenty of water and soap thoroughly after handling.

Response:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and continue rinsing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove contaminated clothing immediately. Rinse skin with soap and water / shower.
P310	Immediately call a POISON CONTROL CENTER or seek medical attention.
P304+P340	IF INHALED: Move person to fresh air and keep comfortable for breathing.
P363	Wash contaminated clothing before reuse.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents and / or container according to local / national / international regulations

2.2 Other hazards
Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Components

Chemical Name	*CAS-No*	*EC*	*INDEX*	*Conc. %*	*Classification*
PHOSPHORIC ACID	7664-38-2	231-633-2	015-011-00-6	53.55%	Skin corrosion, category 1B H314, Serious eye damage, category 1 H318
ISODECYL ALCOHOL POLYETHOXYLATE	61827-42-7	---	---	1.5	Acute toxicity, category 4 H302, Eye irritation, category 2 H319

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. FIRST-AID MEASURES

4.1. Description of first aid measures

GENERAL ADVICE:	Move out of work / application area. Consult a physician. Show this material safety data sheet to the doctor in attendance.
EYES:	Remove contact lenses. In the case of contact with eyes, rinse immediately with plenty of water and seek medical attention. Keep eyes wide open while rinsing. Continue rinsing eyes during transport to medical facility or for at least 30-60 minutes.
SKIN:	Take off contaminated clothing and shoes immediately. Rinse skin with a shower immediately. Seek medical advice / attention.

INHALATION:	Move to fresh air. Seek medical advice / attention immediately. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.
INGESTION:	Drink as much water as possible. Seek medical advice / attention immediately. Do not induce vomiting unless explicitly instructed or authorized by a doctor.

4.2. Most important symptoms and effects, both acute and delayed
Specific information on symptoms and effects caused by the product is unknown.

4.3. Indication of any immediate medical attention and special treatment needed
Not applicable based on available information.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing equipment	Extinguishing substances are: carbon dioxide, foam, powder, and water.
Unsuitable extinguishing equipment	None in particular.

5.2. Special hazards arising from the substance or mixture

Specific hazards during fire fighting	Do not breathe combustion products.

5.3. Advice for firefighters

General information	Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
Special protective equipment for fire-fighters	Normal firefighting clothing i.e., fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures
Block the leakage.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes, and clothing.
These indications apply for both product users and those involved in emergency procedures.

6.2. Environmental precautions
The product must not enter the sewer system or come into contact with surface water or groundwater.

6.3. Methods and material for containment and cleaning up
Collect the leaked product.
Absorb spilled product with inert absorbent material.
Make sure the leakage site is well-aired.
Contaminated material should be disposed of in compliance with the provisions set forth in section 13.

6.4. Reference to other sections
Any information on personal protection and disposal is given in sections 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Keep away from heat, sparks, and open flames.
Do not eat, drink, or smoke during use.
Do not smoke or use matches or lighters.
Remove any contaminated clothes and protective equipment before entering places in which people eat.
The product must not enter the sewer system or come into contact with surface water or groundwater.

7.2. Conditions for safe storage, including any incompatibilities
Store only in the original container.
Store the containers sealed, in a well-ventilated place, away from direct sunlight.
Keep away from heat, sparks, and open flames.
Keep containers away from any incompatible materials. See section 10 for details.

7.3. Specific end use(s)
Refer to section 1.2

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters
Regulatory References:

USA	NIOSH-REL	NIOSH publication No. 2005-1 49, 3rd printing, 2007.
USA	OSHA-PEL	Occupational Exposure Limits- Limits for Air Contaminants Table Z-1-1910-1000
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits (PELs).
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

PHOSPHORIC ACID						
Threshold Limit Value						
Type	Country	TWA / 8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	Ppm	
TLV-ACGIH	-	1		3		
OSHA	USA	1				
CAL/OSHA	USA	1		3		
NIOSH	USA	1		3		
OEL	EU	1		2		

Legend:
(C) = CEILING
INHAL = Inhalable Fraction
RESP = Respirable Fraction
THORA = Thoracic Fraction

8.2. Exposure controls
As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.

Hand Protection — Protect hands with category III work gloves (OSHA 29 CFR 1910.138).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

	The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
Skin Protection	Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.
Eye Protection	Wear airtight protective goggles (OSHA 29 CFR 1910.133).
Respiratory Protection	If the threshold value (e.g., TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapors of various kinds and/or gases or vapors containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited. If the substance considered is odorless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.
Environmental Exposure Controls	This product should not enter the sewer system or come into contact with surface water or groundwater.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid gel
Color	Transparent
Odor	None
pH	0.3 ± 0.2
Boiling Point	> 212°F (100°C)
Flash Point	> 199.4°F (93°C)
Density	1.35 ± 0.05 kg/ liter
Solubility	Fully miscible with water
Auto-ignition temperature	> 500°F (260°C)
Viscosity	80 ± 0.5 cP @ 68°F (20°C)

10. STABILITY AND REACTIVITY

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

PHOSPHORIC ACID

Decomposes at: >329°F (200°C)

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

PHOSPHORIC ACID

Risk of explosion on contact with Nitromethane

May react dangerously with	Alkalis, sodium borohydride

10.4. Conditions to avoid
None in particular. However, the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

PHOSPHORIC ACID

Incompatible with	Metals, strong alkalis, aldehydes, organic sulfides, peroxides

10.6. Hazardous decomposition products

PHOSPHORIC ACID

May develop	Phosphoryl oxides

11. TOXICOLOGICAL INFORMATION

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information
Not classified based on available information.

Information on likely routes of exposure
Not classified based on available information.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Not classified based on available information.

Interactive effects
Not classified based on available information.

Acute toxicity

PHOSPHORIC ACID

LD50 (Oral (Rat)) 1530 mg/kg
LD50 (Dermal (Rabbit)) 2740 mg/kg
LC50 (Inhalation (Rat)) >0.85 mg/liter
Exposure time: 4h

Skin corrosion / irritation
Corrosive for the skin.

Serious eye damage / irritation
Causes serious eye damage.

Respiratory or skin sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT – single exposure
Not classified based on available information.

STOT – repeated exposure
Not classified based on available information.

Aspiration toxicity / hazard
Not classified based on available information.

12. ECOLOGICAL INFORMATION

Use this product according to good working practices. Avoid littering. Inform the appropriate authorities if the product reaches waterways or contaminates soil or vegetation.

12.1. Toxicity
Not classified based on available information.

12.2. Persistence and degradability

PHOSPHORIC ACID

Solubility in Water	>850,000 mg/ liter

12.3. Bioaccumulative potential
None based on available information.

12.4. Mobility in soil
None based on available information.

12.5. Results of PBT and vPvB assessment
On the basis of available data, the product does not contain any Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bio-accumulative (vPvB) in percentages greater than 0.1%.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	Unused product should be considered special non-hazardous waste. Disposal must be performed through an authorized waste management firm, in compliance with local, national, and international regulations.
Contaminated Packaging	Contaminated packaging must be recovered or disposed of in compliance with all waste management regulations.

14. TRANSPORTATION INFORMATION

ADR/RID

UN/ID No.	UN 1993
Proper shipping name	PHOSPHORIC ACID, SOLUTION
Class	8
Packing Group	III
Labels	Label 8
	
Environmental Hazards	NO
Environmental Labels	N/A
HIN – Kemler:	30
Limited Quantities:	5L
Tunnel Restriction Code:	(E)

IMDG

UN/ID No.	UN 1993
Proper shipping name	PHOSPHORIC ACID, SOLUTION
Class	8
Packing Group	III
Labels	Label 8
	
Environmental Hazards	NO
Environmental Labels	N/A
EMS:	F-A, S-B
Limited Quantities:	5L

IATA

UN/ID No.	N/A
Proper shipping name	PHOSPHORIC ACID, SOLUTION
Class	8
Labels	Label 8
	
Environmental Hazards	NO
Environmental Labels	N/A
Packing instruction (cargo aircraft)	Maximum Quantity: 60L, Packing instruction: 856
Packing instruction (passenger aircraft)	Maximum Quantity: 5L, Packing instruction: 852
Special precautions for user:	A3, A803

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA	All components of this product are listed on US Toxic Substances Control Act (TSCA) Inventory considered as "existing" chemical substances in U.S. commerce.	
Clean Air Act Section 112(b)	CAS 7664-38-2	PHOSPHORIC ACID (Phosphorous compounds)
Clean Air Act Sections 112(b), 602 Class I Substances, 602 Class II Substances	This product, in compliance to the Act, does not contain any substances regulated as pollutants.	
Clean Water Act Priority and/or Toxic Pollutants	This product, in compliance to the Act, does not contain any substances regulated as pollutants.	
DEA List I Chemicals (Precursor Chemicals) and List II Chemicals (Essential Chemicals)	No component(s) listed; in compliance with the List.	
EPA List of Lists 313 Category Code:	No component(s) listed; in compliance with the List.	
EPCRA 302 EHS TPQ	No component(s) listed; in compliance with the List.	
CERCLA RQ	CAS 7664-38-2	PHOSPHORIC ACID (Phosphorous compounds)
EPCRA 313 TRI	No component(s) listed; in compliance with the List.	
RCRA Code	No component(s) listed; in compliance with the List.	
CAA 112 (r) TMP TQ	No component(s) listed; in compliance with the List.	

State Regulations

Massachusetts / Minnesota/ New Jersey / New York / Pennsylvania / California:

CAS 7664-38-2 PHOSPHORIC ACID (Phosphorous compounds)

CA Proposition 65:

This product does not contain chemicals known to the State of California to cause cancer, reproductive harm, or birth defects.

16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

LEGEND:

313 CATEGORY CODE	Emergency Planning and Community Right-to Know Act Section 313 Category Code
ADR	European Agreement concerning the carriage of Dangerous goods by Road
CAA 112 (r) RMP TQ	Risk Management Plan Threshold Quantity (Clean Air Act Section 112(R))
CAS NUMBER	Chemical Abstract Service Number
CE50	Effective concentration (required to induce a 50% effect)
CERCLA RQ	Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
CLP	EC Regulation 1272/2008
DEA	Drug Enforcement Administration
EmS	Emergency Schedule
EPA	US Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPCRA 302 EHS TPQ	Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
EPCRA 304 EHS RQ	Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
EPCRA 313 TRI	Toxics Release Inventory (Section 313 Category Code)
GHS	Globally Harmonized System of classification and labeling of chemicals
IATA DGR	International Air Transport Association Dangerous Goods Regulation
IC50	Immobilization Concentration 50%
IMDG	International Maritime Code for dangerous goods
IMO	International Maritime Organization
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
OEL	Occupational Exposure Level
PEL	Predicted Exposure Level
RCRA Code	Resource Conservation and Recovery Act Code
REL	Recommended Exposure Limit
RID	Regulation concerning the international transport of dangerous goods by train
TLV	Threshold Limit Value
TLV CEILING	Concentration that should not be exceeded during any time of occupational exposure.
TSCA	Toxic Substances Control Act
TWA STEL	Short-term Exposure Limit
TWA	Time-weighted Average Exposure Limit
VOC	Volatile Organic Compounds
WHMIS	Workplace Hazardous Materials Information System

GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- 6 NYCRR part 597

- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

NOTE FOR USERS:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Purchasers must provide product users with adequate training on how to use chemical products.

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CALCULATION METHODS FOR CLASSIFICATION

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), unless determined otherwise in Section 11 and 12.
The data for evaluation of chemical-physical properties are reported in section 9.