RRF Rust Removal Flush

Ready-to-use cooling-system flush for rust and iron-deposit removal

Controlled safety source: SDS_RRF.pdf, SDS UC-012, revision January 20, 2026. This TDS does not replace the current Safety Data Sheet.

PRODUCT OVERVIEW

RRF Rust Removal Flush is intended for cooling-system treatment where rust or iron-related contamination has been identified. RRF may be specified alone or as part of an approved combination procedure.

Recommended use	Rust and iron-deposit removal in engine cooling systems	**Physical state**	Liquid
Appearance / odor	Clear liquid / slight acidic	**pH**	2.0-2.5
Specific gravity	1.26	**Water solubility**	Completely soluble
Flash point	Non-flammable	**Transport**	UN1805 Phosphoric acid solution, Class 8, PG III
Signal word	DANGER	**NFPA**	2-0-0

CRITICAL PRODUCT CONDITION

NO DILUTION - RRF IS READY TO USE.

- Use RRF exactly as supplied from the original labeled container.
- Do not dilute RRF with water.
- Do not combine RRF with another flush unless the approved published procedure specifically requires that combination.
- This TDS does not select or reproduce a complete treatment sequence.

SHIPPING, PACKAGE AND LOGISTICS

Variant	Physical Package	SKU	Gross Weight	Dimensions	NMFC	Class
Standard	5 Gallon Bucket	RRF005	44 lb	10.25 x 10.25 x 14.75 in	44155	70
Standard	55 Gallon Drum	RRF055	484 lb	23.5 x 23.5 x 35 in	44155	70
Standard	250 Gallon Tote	RRF250	2,200 lb	40 x 47 x 46 in	44155	70
Double Strength	250 Gallon Tote	RRF500	2,200 lb	40 x 47 x 46 in	44155	70
Triple Strength	250 Gallon Tote	RRF750	2,200 lb	40 x 47 x 46 in	44155	70

DOT, IATA and IMDG: UN1805, Phosphoric acid solution, Class 8, Packing Group III. CERCLA RQ for phosphoric acid: 5,000 lb. No listed package reaches the constituent RQ because total package weight is below 5,000 lb. NMFC 44155 / Freight Class 70 is the current master-matrix value and remains subject to ClassIT+ confirmation.

NFPA 704



Health	2	Moderate health hazard
Flammability	0	Non-flammable
Instability	0	Stable under normal conditions
Special	-	Not determined

GHS HAZARD COMMUNICATION



GHS05 Corrosion
DANGER
Causes severe skin burns and eye damage.
Other hazard: toxic to aquatic life with long lasting effects.

SAFE HANDLING AND REQUIRED PPE

- RRF is corrosive. Prevent skin and eye contact.
- Wear chemical splash goggles and a face shield.
- Wear suitable chemical-resistant gloves and protective clothing.
- Do not breathe mist, vapor or spray.
- Ensure adequate ventilation, especially in enclosed or confined areas.
- Keep eyewash stations and emergency showers immediately accessible.
- Wash hands, face and exposed skin thoroughly after handling.
- Wash contaminated clothing before reuse.

STORAGE AND INCOMPATIBILITIES

- Keep the container tightly closed in a cool, dry and well-ventilated place.
- Store locked up and out of reach of children.
- Protect from freezing. If frozen, allow the product to thaw completely before use.
- Store away from strong alkalis, bleach, ammonia and incompatible materials.
- Do not mix RRF with another product unless the approved procedure specifically requires that combination.

FIRST AID FROM CURRENT SDS

Exposure	Current SDS direction
Eyes	Immediately flush with plenty of water. After initial flushing, remove contact lenses and continue flushing for at least 15 minutes.
Skin	Immediately flush affected skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	DO NOT induce vomiting. If conscious, give several glasses of milk, preferred, or water. Immediately call a poison center or doctor/physician.

Emergency contact: INFOTRAC 1-800-535-5053 North America; 1-352-323-3500 International.

SPILL, FIRE AND ENVIRONMENTAL HANDLING

- Stop the release if safe and protect drains.
- Neutralize only under an approved spill procedure using soda ash or another suitable acid-neutralizing agent.
- Absorb with inert material and transfer recovered material to properly labeled compatible containers.
- Use dry chemical, carbon dioxide or water spray/fog for fire control as appropriate to surrounding conditions.
- Firefighters require self-contained breathing apparatus and full protective gear.
- Do not discharge RRF or contaminated rinsate to storm drains, soil, surface water or groundwater-sensitive areas.
- RRF is toxic to aquatic life with long lasting effects and is readily biodegradable.

OPERATING CONTROL

RRF is used where rust or iron-related contamination has been identified.

The complete operating procedure is controlled separately and must be obtained from the permanent Procedures page.

- Do not infer a standalone treatment sequence from this TDS.
- RRF may be used alone or in an approved combination procedure.
- Approved combinations include HDF + RRF, PMF + RRF and OCF + RRF when selected for the diagnosed condition.
- Do not mix RRF with strong alkalis, bleach, ammonia or unknown chemicals.
- Review the current SDS before handling or use.

TRANSPORTATION AND REGULATORY PROFILE

Mode / Field	Controlled value
DOT	UN1805, Phosphoric acid solution, Class 8, Packing Group III
IATA	UN1805, Phosphoric acid solution, Class 8, Packing Group III
IMDG	UN1805, Phosphoric acid solution, Class 8, Packing Group III
Marine pollutant	Current SDS states this material may meet the definition of a marine pollutant.
CERCLA RQ	5,000 lb for phosphoric acid
California hazardous waste	Phosphoric acid listed as corrosive in the current SDS.
California Proposition 65	Current SDS states this product does not contain Proposition 65 chemicals.

DOCUMENT CONTROL

Product	RRF Rust Removal Flush
Product code	RRF
Safety source	SDS_RRF.pdf | SDS UC-012 | revision January 20, 2026 | Version 1
Operational source	RRF_TDS.PDF | Revision 1, August 4, 2026
Shipping source	2026 Ultimate Chemicals Product Shipping Specs Matrix.xlsx
NFPA asset	NFPA_2-0-0.svg
GHS asset	GHS05_Corrosion.png
Header artwork	Approved Ultimate Chemicals logo upper left; MASTER_PRODUCT_LOGO_RRF_TRANSPARENT.png upper right
Program/footer artwork	Approved Zero Hour Certified Cooling System badge
Procedures URL	https://ultimatechemicals.com/pages/steps

QUICK ACCESS

Scan the QR code or select the printed URL. Each printed URL is embedded as a clickable PDF hyperlink.

PRODUCT PAGE	SDS	TDS	PROCEDURES
https://ultimatechemicals.com/products/rrf	https://ultimatechemicals.com/sds/rrf	https://ultimatechemicals.com/tds/rrf_tds.pdf	https://ultimatechemicals.com/pages/steps