

SAFETY DATA SHEET

ADVANTAGE ® R&O 320



Section 1 - Identification

1.1 Product Identifiers

Product Name : ADVANTAGE ® R&O 320
Product Code(s) : 472-000, 472-005, 472-055

1.2 Product Usage

Recommended Usage : Rust Oxidation Fluid
Restricted Usage : Not Intended for any other usage

1.3 Emergency Support

Emergency Support : CHEMTREC
United States/Canada +1(800) 424-9300

1.4 Supplier Information

Advanced Lubrication Specialties
420 Imperial Court
Bensalem, PA 19020
United States

Phone : 215-214-2114

Fax : 215-214-2118

Email : sds@advancedlubes.com
technical@advancedlubes.com
sales@advancedlubes.com

Section 2 - Hazards Identification

2.1 Classification of the Substance or the Mixture

GHS Rating(s) : No Classified Hazards
Signal Word : Not Applicable

2.2 Label Elements

No Classified Hazards.

Precautionary : **P201** Obtain Special Instructions Before Use.
: **P202** Do Not Handle Until All Safety Precautions Are Understood.
: **P281** Use Personal Protective Equipment As Required.

Response : **P308** If Exposed Or Concerned: Get Medical Advice/attention.

Storage : **P405** Store Locked Up.

Disposal : **P501** Dispose Of Container According To Regional Regulations.

2.3 Other Hazards

Section 3 - Composition / Information on Ingredients

3.1 Substance Details

Chemical Name	CAS #	%Weight
BASE OIL SEVERELY REFINED	64742-65-0	22.0
RESIDUAL OILS, PETROLEUM, SOLVENT-DEWAXED	64742-62-7	77.0

INERT The remaining percentage are not listed as Physical or Health Hazards (29 CFR 1910.1200) 1.0

Products containing mineral oil with less than 3% DMSO extract as measured by IP-346.

Section 4 - First Aid Measures

4.1 First Aid Measures

- Eye Contact** : Immediately flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get Medical Attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

4.2 Symptoms & Effects

- To Physician** : Treat symptomatically. Contact poison specialist if product has been ingested.
- Specific Treatment** : No Specific Treatment.

4.3 Medical Attention

Protection of First Aiders : No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Note To Doctor : Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.

Section 5 - Fire Fighting

5.1 Extinguishing Media

Suitable Media : CO2, Dry chemical, or Foam. Water can be used to cool and protect product. Do not use
Unsuitable Media water jet as an extinguisher, it will spread the fire.

Specific hazards arising from this product : When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. This material creates a special hazard because it floats on water. This material is harmful to aquatic life. Any fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

5.3 Firefighters Advice

Special protective equipment : Fire Equipment Information: Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus(SCBA) with a full face -piece operated in positive pressure mode.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment

General Measures : No health effects expected from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in section 8 of this SDS.

6.2 Environmental Precautions

Non-Emergency Personnel : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform authorities if the product has caused environmental pollution. Water Polluting Material may be harmful to the environment if released in large quantities.

6.3 Materials & Methods to Contain and Cleanup

Reference Section 8 : Follow all protective equipment recommendations provided in Section 8.

Spill Control Measures : Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center.

Containment and Cleanup : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillage's with noncombustible, absorbent material e.g. sand earth vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via licensed waste disposal contractor. Contaminated absorbent material may pose the same threat hazard as the spilled product.

Section 7 - Handling & Storage

7.1 Safe Handling

Personal Protective Equipment : Put on appropriate personal protective equipment (see section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, keep lid tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.2 Safe Storage

Required conditions : Odorous and toxic fumes may form from the decomposition of this product if stored at temperatures in excess of 113 deg F (45 deg C) for extended periods of time or if heat sources in excess of 250 deg F (121 deg C) are used. Store away from incompatible materials. See section 10 for incompatible materials.

7.3 Specific End Use

Designed Purpose : This product is designed for use as a Rust Oxidation Fluid

Section 8 - Exposure Control

8.1 United States Exposure Limits

CAS	Chemical Name	Exposure Limits	Source
64742-65-0	Distillates, petroleum, solvent-dewaxed	5mg/m3	

8.2 Exposure Controls

- Engineering Controls** : Material should be handled in enclosed vessels and equipment, in which case general room ventilation should be sufficient. Local exhaust ventilation should be used at points where dust, mist, vapors or gases can escape into the room air. No special requirements under ordinary conditions of use and with adequate ventilation.
- Environmental Exposure Controls** : General room ventilation should be satisfactory. Local exhaust ventilation may be necessary if misting is generated.
- Hygiene Measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
- Eye / Face Protection** : If contact is likely, safety glasses with side shields are recommended.
- Skin / Hand Protection** : Butyl rubber. Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Use caution when opening manway covers of storage and transportation containers. 3-nitroaniline crystals may be present on the interior surface of these openings. 3-nitroaniline is toxic by dermal exposure.
- Respiratory Protection** : Use a properly fitted air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this a necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9 - Physical & Chemical Properties

9.1 Information On Basic Physical and Chemical Properties

Physical state	: Liquid
Color	: B&C
Odor	: Characteristic of Petroleum
Odor threshold	: No Data Available
pH	: No Data Available
Freezing Point	: No Data Available
Boiling Point / Range	: No Data Available
Flash Point COC	: 257C
Evaporation rate:	: No Data Available
Upper Explosive Limits (% air)	: No Data Available
Lower Explosive Limits (% air)	: No Data Available
Flammability (solid, gas)	: Not Applicable
Vapor pressure	: <1 mm Hg
Vapor density (air=1)	: > 1
Relative Density	: 0.88
Auto-ignition temperature	: Not Determined
Decomposition temperature	: Not Determined
Solubility in water	: Negligible, 0-1%
Partition coefficient, n-octanol/water	: No Data Available
Viscosity @ 40C	: 153 cst
Viscosity @ 100C	: 15 cst

Section 10 - Stability & Reactivity

10.1 Material Analysis

Reactivity	: No Data Available
Chemical stability	: Stable Under Normal Circumstances.
Possibility of hazardous reactions	: Hazardous polymerization will not occur.

10.2 Environmental

Conditions to avoid	: Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Carbon monoxide, Smoke, Carbon monoxide, sulfur oxides, aldehydes, and other petroleum decomposition products in the case of incomplete combustion. Oxides of nitrogen, phosphorus, calcium, copper, magnesium, sodium, and hydrogen sulfide may also be present

Section 11 - Toxicological Information

11.1 Toxicological Effects

Ingestion Toxicity	: No hazard in normal industrial use.
Skin Contact	: This material is likely to be slightly irritating to skin based on animal data.
Inhalation Toxicity	: Non-hazardous under Respiratory Sensitization category.
Eye Contact	: The material is likely to be irritating to eyes based on animal data.

11.2 Inhalation Toxicity Data

CAS	Chemical Name	Test	Value	Species	Source
64742-62-7	Residual oils, petroleum, solvent-dewaxed	Inhalation	2.18mg/L	4h Rat	NLM_CIP

Section 11 - Toxicological Information Continued

11.3 Dermal & Other Toxicity Data

CAS	Chemical Name	Test	Value	Species	Source
64742-62-7	Residual oils, petroleum, solvent-dewaxed	LC50	5000mg/L	96h Oncorhynchus	IUCLID
64742-65-0	Distillates, petroleum, solvent-dewaxed heavy paraffinic	LC50	5000mg/L	96h Oncorhynchus	IUCLID

Sensitizer	: No data available to indicate product or components may be a skin sensitizer.
Mutagenicity	: No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Carcinogenicity	: Not expected to cause cancer. This product meets the IP-346 criteria of <3%.
Reproductive Toxicity	: No data available if components greater than 0.1% may cause birth defects.

Section 12 - Ecological Information

12.1 Aquatic Toxicity

Acute Aquatic ecotoxicity	: Non-hazardous under Aquatic Acute Environment category.
Chronic Aquatic ecotoxicity	: Non-hazardous under Aquatic Chronic Environment category.
Persistence and degradability	: Biodegrades slowly.
Bioaccumulative potential	: Bioconcentration may occur.
Mobility in soil	: This material is expected to have essentially no mobility in soil.
Results of PBT and vPvB assessment	: Not determined.
Other adverse effects	: No data available.

12.2 Ecological Data

CAS	Chemical Name	Test	Value	Species	Source
64742-62-7	Residual oils, petroleum, solvent-dewaxed	EC50	1000mg/L	48h Daphnia magna	IUCLID
64742-65-0	Distillates, petroleum, solvent-dewaxed heavy paraffinic	EC50	1000mg/L	48h Daphnia magna	IUCLID

Section 13 - Disposal Considerations

13.1 Waste treatment

Waste treatment methods	: Dispose of according to Federal, State, Local, or Provincial regulations.
Disposal Methods	: Recycle used oil.
Waste Disposal	: Use material is non-hazardous according to environmental regulations.
Contaminated packaging	: Recycle containers whenever possible!

Section 14 - Transportation Information

14.1 U.S. Department of Transportation (DOT)

14.2. Shipping Description	: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil) International Maritime Dangerous Goods (IMDG)
14.2. DOT Compliance Note	: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)
14.2. DOT Compliance Requirement	: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24

Section 15 - Regulatory Information

Regulatory Agency

(TSCA) Toxic Substance Control Act : All components are either listed or not regulated US TSCA Inventory.

Chemical List Status

64742-62-7
64742-65-0

WHMIS Hazard Class : None

Canada CPR : This product has been classified in accordance with the hazard criteria Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

CERCLA Sections

302, 313, 372 : This material does not contain reportable chemicals.
311, 312 : Acute Health Hazard No Pressure Hazard No Fire Hazard No
Chronic Health Hazard No Reactive Hazard No

New Jersey Right to Know (NJ RTK)

This material does not contain reportable chemicals.

Massachusetts Right to Know (MA RTK)

This material does not contain reportable chemicals.

Pennsylvania Right to Know (PA RTK)

This material does not contain reportable chemicals.

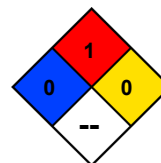
Rhode Island Right to Know (RI RTK)

This material does not contain reportable chemicals.

Section 16 - Other Information

ACGIH American Conference of Governmental Industrial Hygienists
CFR Code of Federal Regulations
DOT United States Department of Transportation
GHS Globally Harmonized System of Classification and Labeling of Chemicals
NIOSH National Institute for Occupational Safety and Health
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
RTK Right-to-Know
SARA Short-term Exposure Limit
TSCA Toxic Substances Control Act
WHMIS Workplace Hazardous Materials Information System

NFPA: HEALTH 0
FLAMMABILITY 1
INSTABILITY 0
SPECIAL -



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Internal Use: 3E9