



MATERIAL SAFETY DATA SHEET

1. Product and company identification

Product name	ARI-350C	
Manufacturer		
Company Name	Merichem Company	
Address	5455 Old Spanish Trail Houston, TX 77023 United States	
Emergency Telephone	For Chemical Emergency ONLY: CHEMTREC®, Russia (toll free): 8-800-100-6346 (in country only) +1 713-428-5000	
General Information	+1 713-428-5000	
Fax	+1 713-936-3634	
E-Mail	msdsinquiry@merichem.com	
Only Representative		
Company Name	Merichem Europe Limited	
Address	Michail Georgiou 70 Atheniou P.C. 7600 Lamarca, Cyprus	
Recommended use	Industrial desulfurization application	
Limitations on use	Not available.	
MSDS No.	Not available.	

2. Hazards identification

Hazard classification		
Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2
Environmental hazards	Not classified.	

Label elements



Signal word	Warning	
Hazard statement		
H319	Causes serious eye irritation.	
H351	Suspected of causing cancer.	
Precautionary statement		
Prevention		
P264	Wash thoroughly after handling.	
P280	Wear eye protection/face protection.	
P201 + P202	Before use, obtain special instructions and learn how to work with these products safely.	
Response		
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P308 + P311	IF exposed or concerned: Call a POISON CENTER/doctor.	
P337 + P313	If eye irritation persists: Get medical advice/attention.	
Storage		
P405	Store locked up.	
Disposal		
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Other hazards	None known.	

Supplemental information None.

3. Composition/information on ingredients

Substance or mixture Mixture

Chemical property	CAS Number	Concentration (%)
Water	7732-18-5	51 - 90%
Proprietary Ingredient A	Proprietary *	10 - 49%

Composition comments *Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Substance classification in accordance with GOST 12.1.007:
Proprietary Ingredient A (CAS-no. Proprietary): Class 3 (moderately hazardous substance).

4. First aid measures

First aid measures for different exposure routes

Inhalation Move to fresh air. Provide oxygen, if available, or artificial respiration, if needed. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms and effects Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Notes to physician Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General advice IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

General fire hazards The product is a difficultly burning material according to GOST 12.1.044.

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

Unsuitable extinguishing media None known.

Specific hazards during fire fighting During fire, gases hazardous to health may be formed.

Special fire fighting procedures Move containers from fire area if you can do so without risk.

Personal protective equipment for fire-fighting Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions 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. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

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

Clean-up methods and materials and containment measures Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.

7. Handling and storage

Handling

Precautions	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in contact with eyes. Avoid release to the environment.
Safe handling advice	Avoid prolonged exposure. Should be handled in closed systems, if possible. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the MSDS.
Technical measures	No specific recommendations.
Local and general ventilation	Provide adequate ventilation.

Storage

Technical measures	No specific recommendations.
Suitable storage conditions	Store locked up. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the MSDS).
Incompatible materials	For further information, please refer to section 10 of the MSDS.
Safe packaging materials	Store in original tightly closed container.

8. Exposure controls/personal protection

Occupational exposure limits No exposure limits noted for ingredient(s).

Engineering measures 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. Provide eyewash station.

Personal protective equipment

Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Eye protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing. Use of an impervious apron is recommended.

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 and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Colorless to yellowish liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear. Colorless to yellowish.
Odor	Slight amine.
Odor threshold	Not available.
pH	9,5 - 12,4 (1% solution)
Melting point/freezing point	-4 °F (-20 °C) Approximate.
Initial boiling point and boiling range	219,2 °F (104 °C) Approximate.
Flash point	Not applicable.
Combustion temperature	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Vapor pressure	25 mm Hg Approximate.

Density	Not available.
Viscosity	Not available.
Solubility(ies)	
Solubility (water)	Miscible in all proportions.
Partition coefficient (n-octanol/water)	Not available.
Evaporation rate	Not available.
Relative density	1,1 - 1,4 Approximate.
Percent volatile	58 % Approximate.
Other data	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Components	Species	Test Results
Proprietary Ingredient A (CAS Proprietary *)		
Acute		
Oral		
LD50	Rat	1100 mg/kg
Routes of exposure	Eye contact.	
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.	
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.		
Not Listed.		
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.	
<p>When administered at high doses in drinking water to male rats, Proprietary Ingredient A has induced renal tubular adenomas and adenocarcinomas. In two-stage studies of carcinogenicity in male rats treated by oral administration of Proprietary Ingredient A, the incidence of urinary tract tumors after pre-treatment with N-nitrosamines was increased.</p>		
IARC Monographs. Overall Evaluation of Carcinogenicity		
Proprietary Ingredient A (CAS Proprietary *)		2B Possibly carcinogenic to humans.
Russian Federation. Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008		
Not listed.		
Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	

Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicological data

Components	Species	Test Results
Proprietary Ingredient A		
Aquatic		
Fish	LC50 Bluegill (<i>Lepomis macrochirus</i>)	175 - 225 mg/l, 96 hours
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.	
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulation		
Mobility in soil	This product is miscible in water.	
Other hazardous 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

Residual waste	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 (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Local disposal regulations	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport information

ADR

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

Applicable regulations

Russian Federation. Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

Ministry of Health and Social Development of Russian Federation. Order № 83 of 16.08.2004. List of hazardous and/or dangerous production factors and work under which preliminary and periodic medical examinations are conducted, methods of the examinations.

Proprietary Ingredient A (CAS Proprietary *) 1,2,21,1.

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Not listed.

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

Country(s) or region	Inventory name	On inventory (yes/no)*
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 this product complies 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

References

GOST 30333-2007 Chemical production safety passport. General requirements.
 GOST 31340-2013 Labeling of chemicals. General requirements.
 GOST 32419-2013 Classification of chemical products. General requirements.
 GOST 32424-2013 Classification of chemicals for environmental hazards. General principles.
 GOST 12.1.007-76 Occupational safety standard system. Noxious substances. Classification and general safety requirements.
 GOST 12.1.044-89. Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of substances and materials. Nomenclature of indices and methods of their determination.
 GOST 19433-88. Dangerous goods. Classification and marking.
 GOST 12.1.004-91. Occupational safety standards system. Fire safety. General requirements.
 GOST 32425-2013 Mixtures classification of hazard for environmental.
 GOST 32423-2013 Mixtures classification of hazard for health.

Issued by

Not available.

Further information

The contents of this Safety Data Sheet are Merichem Company confidential and proprietary information.

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