

# WELDING CHEMICALS INC. SAFETY DATA SHEET

## Section 1: Identification

**MSDS Name:** SDS-RDP-WAT-A-ENG

**Product Identifier:** RDP-WAT-A WATER WASHABLE – RED DYE PENETRANT

**Other Means of Identification:** None.

**Recommended Use:** Type 2, Visible Dye Penetrant, Method A, Water Washable, furnished in a ready-to-use condition that does not require mixing or stirring.

**Restrictions on Use:** No information available.

**Item Numbers:** RDP-WAT-A

**Bar Codes:** 8 10048 30024 2

**Chemical Name/Synonyms:** Dye Penetrant Inspection

**Supplier Identification and Address:**

Welding Chemicals Inc.,

2236 Liberty Drive

Niagara Falls, NY 14304

(716) 402-6906

570 Industrial Drive

Fort Erie, Ontario L2A 5M4

(905) 963-3339

**Email:** [qc@weldingchemicalsinc.com](mailto:qc@weldingchemicalsinc.com)

**Web:** [www.weldingchemicalsinc.com](http://www.weldingchemicalsinc.com)

**In emergency call 911.**

**Emergency Telephone Number (M-T 8:30 to 4:30 EST):** 716-402-6906

**For CHEMTREC assistance, call:** 800-424-9300

**For Canada only:** 1-888-CAN-UTEC (226-8832), 613-996-6666 or \*666 on a cellular phone.

## Section 2: Hazard(s) Identification

**GHS Classification:**

Flammable Aerosol: Category 1

Carcinogen: Category 1B

Aspiration hazard: Category 1

Hazardous to the aquatic environment: Acute Hazard Category 1

Hazardous to the aquatic environment: Chronic Hazard Category 2

**GHS Label Elements:**



**Signal Word(s):** Danger

**Hazard Statement(s):**

H222 Extremely flammable aerosol.

H304 May be fatal if swallowed and enters airways.

H350 May cause cancer.

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with lasting effects.

**Precautionary Statement(s):**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Pressurized container: Do not pierce or burn, even after use.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 IF SWALLOWED: Immediately call a poison center or doctor.

P308+P313 IF EXPOSED OR CONCERNED: Get medical advice/attention.

P331 Do not induce vomiting.

P391 Collect spillage.

**Description of Other Hazards:** None.

**Storage:**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122 °F

**Disposal:**

P501 Dispose of contents / container to an approved waste disposal plant.

**Section 3: Composition/ Information on Ingredients**

Chemical Name	CAS No.	% Conc. WT
Heavy Aromatic Solvent Naphtha	64742-94-5	>=60
Propane	74-98-6	10 - 30
N-Butane	106-97-8	5 - 10
Naphthalene	91-20-3	5 - 10
Isobutane	75-28-5	5- 10
Nonylphenoxy Poly(Ethyleneoxy) Ethanol	68412-54-4	1 - 5
1,2,4-Trimethyl Benzene	95-63-6	1 - 5

**Section 4: First-Aid Measures**

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist or if unconscious.

**INGESTION:** Unlikely due to being in aerosol form. Should actual ingestion occur, do not induce vomiting! Drink a glass of water or milk to dilute. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**EYE CONTACT:** Immediately flush with plenty of clear water for at least 15 minutes. Make sure to flush under the eyelids. Consult a physician for definitive treatment.

**SKIN CONTACT:** Remove with soap and water. Continue flushing with water for several minutes. Use skin cream to counter resulting dryness. Consult a physician if irritation continues or if large skin area is affected.

**Most Important Symptoms and Effects, Acute and Delayed:** Eye irritation, dermatitis, confusion, skin irritation, headache, dizziness, narcosis, drowsiness, mucous membrane.

**Immediate Medical Attention and Special Treatment:** Treat symptomatically and supportively.

**Section 5: Fire-Fighting Measures**

**Suitable Extinguishing Media:** For warehouse and storage conditions, use NFPA Class B extinguishers (CO<sub>2</sub>, dry chemical or universal aqueous film forming foam).

**Unsuitable Extinguishing Media:** Water jet.

**Specific Hazards Arising from the Product / Chemical:** Decomposition products may include: oxides of carbon, smoke, vapors. See also Section 10. CONTENTS EXTREMELY FLAMABLE UNDER PRESSURE. In a fire or if heated, a pressure increase will occur which may result in container bursting. Vapors heavier than air may spread along the ground and travel to an ignition source.

**Explosion Data**

**Sensitivity to Mechanical Impact:** N/Av

**Sensitivity to Static Discharge:** N/Av

**Special Protective Equipment and Precautions for Firefighters:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to cool fire exposed aerosol containers for containers can rupture violently from heat developed pressure. Combustion generates toxic fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

### Section 6: Accidental Release Measures

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation. Use proper personal protective equipment as indicated in Section 8.

**Environmental Precautions:** Prevent spilled material from entering sewers, storm drains, and natural waterways.

**Methods and Materials for Containment:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable containers. Keep all sources of ignition away from spill/release.

**Measures for Cleaning Up:** Clean up spills immediately, observing precautions in Section 8. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Provide ventilation.

**Special Instructions:** In case of rupture contents are generally evacuated from the can rapidly. Area should be ventilated immediately, and continuous ventilation provided until all fumes and vapors have been removed. Aerosol cans should never be incinerated or burned. See Section 13 for disposal considerations.

### Section 7: Handling and Storage

**Precautions for Safe Handling:** Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

#### **Conditions for Safe Storage, Including Incompatibilities**

**Storage:** Store in area below 120°F (49°C). Do not incinerate (burn) containers. Assure can is in a secure place to prevent knocking over and accidental rupture. Always replace over cap when not in use. For store of pallet quantities, compliance with ANSI/NFPA 30B is recommended.

**Incompatibilities:** Strong acids. Strong bases. Strong oxidizing agents.

**NFPA 30B Classification:** Product is classified as a Level 3 Aerosol per NFPA 30B.

### Section 8: Exposure Controls/Personal Protection

#### **Control Parameters:**

N-Butane (106-97-8)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1000 ppm
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	1000 ppm
OSHA	OSHA PEL (TWA) (ppm)	800 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900
NIOSH	NIOSH REL (TWA) [ppm]	800 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	800 ppm
Propane (74-98-6)		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
NIOSH	US IDLH (ppm)	2100 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) [ppm]	1000 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	1000 ppm

Isobutane (75-28-5)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1000 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) [ppm]	800 ppm

Naphthalene (91-20-3)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 ppm
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	15 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
NIOSH	US IDLH (ppm)	250 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) [ppm]	10 ppm
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	75 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) [ppm]	15 ppm
Biological Exposure Index	n-Methylformamide in Urine, End of shift	15 mg/l
Biological Exposure Index	n-Acetyl-s-(n-Methylcarbamoyl) cysteine in Urine, Prior to last shift of workweek (Sq)	40 mg/l

1,2,4-Trimethyl Benzene (95-63-6)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	25 ppm
NIOSH	NIOSH REL (TWA) [ppm]	25 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	125 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	25 ppm

Heavy Aromatic Solvent Naphtha (64742-94-5)		
OSHA	OSHA PEL (TWA) (ppm)	500 ppm

**Appropriate Engineering Controls:** Good ventilation using local exhaust should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Individual Protection Measures**



**Eye / Face protection:** If required, wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA'S eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

**Skin and Body Protection:** For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or repeated contact could occur, use protective clothing such as WAT-Vex® gloves or other clothing impervious to the ingredient listed in Section 2.

**Respiratory Protection:** Respiratory protection program meeting OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed when workplace conditions warrant respirator use.

**Hygiene Measures:** Standard precautionary measures for safe chemical handling. PVC, Neoprene or Nitrile rubber gloves. Do not eat, drink, or smoke when using this product.

### Section 9: Physical and Chemical Properties

**Physical state:** Liquid / Gas

**Color:** Red

**Odor:** Solvent

**Odor threshold:** N/Av

**pH:** N/Av

**Melting Point:** > -95 °C

**Freezing Point:** N/Av

**Initial Boiling Point/Boiling Range:** >126 °C

**Flash Point:** >28 °C liquid / >-104 °C propellant

**Evaporation Rate (BA=1):** N/Av

**Flammability (Solid, gas):** Extremely flammable aerosol.

**Upper/Lower Flammability or Explosive Limits:** LEL 0.80 UEL 22.50 vol %

**Vapor Pressure (mm HG):** N/Av

**Vapor Density (AIR=1):** N/Av

**Relative Density (@21 °C):** N/Av

**Solubility in/Miscibility with water (% by weight):** N/Av

**Partition Coefficient: n-Octanol/Water:** N/Av

**Auto-ignition Temperature:** >180 °C

**Decomposition Temperature:** N/Av

**Viscosity:** N/Av

**Explosive Properties:** None known.

**Oxidizing Properties:** None known.

### Section 10: Stability and Reactivity

**Reactivity:** No dangerous reactions known.

**Chemical Stability:** Stable under normal temperatures and pressures.

**Possibility of Hazardous Reactions:** None under normal processing.

**Conditions to Avoid:** Incompatible materials, excess heat, sources of ignition.

**Incompatible Materials:** Oxidizing agents, strong acids, halogen compounds, aluminum chloride.

**Hazardous Decomposition Products:** Oxides of carbon, aldehydes.

**Hazardous Polymerization:** Will not occur.

### Section 11: Toxicological Information

N-Butane (CAS: 106-97-8 / EC: 203-448-7)

LC50 Inhalation (Rat)	658 mg/l/4h (ChemInfo)
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LC50 Inhalation (Rat)	276000 ppm/4h (ChemInfo)
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Propane (CAS: 74-98-6 / EC: 200-827-9)

LC50 Inhalation (Rat)	658 mg/l/4h (Lit.)
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Isobutane (CAS: 75-28-5 / EC: 200-857-2)

LC50 Inhalation (Rat)	368000 ppm/4h (ChemInfo)
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Naphthalene (CAS: 91-20-3 / EC: 202-049-5)

LD50 Oral (Rat)	2200 mg/kg (ChemInfo)
LD50 Dermal (Rat)	> 2500 mg/kg (RTECS)
LD50 Dermal (Rabbit)	> 20000 mg/kg (RTECS)
LC50 Inhalation (Rat)	> 0.4 mg/l/4h (MERCK)
LC50 Inhalation (Rat)	141 ppm/4h (ChemInfo)

**1,2,4-Trimethyl Benzene (CAS: 95-63-6 / EC: 202-436-9)**

LD50 Oral (Rat)	> 5000 mg/kg (RTECS)
LD50 Dermal (Rat)	> 3440 mg/kg (Lit.)
LC50 Inhalation (Rat)	18 mg/l/4h (RTECS)

**Heavy Aromatic Solvent Naphtha (CAS: 64742-94-5 / EC: 265-198-5)**

LD50 Oral (Rat)	> 5000 mg/kg (External SDS)
LD50 Dermal (Rabbit)	> 2000 ml/kg (External SDS)
LC50 Inhalation (Rat)	590 mg/l (External SDS)

**Nonylphenoxy Poly(Ethyleneoxy) Ethanol (CAS: 68412-54-4 / EC: )**

LD50 Oral (Rat)	2000 mg/kg (External SDS)
LD50 Dermal (Rabbit)	4400 mg/kg (Sigma-Aldrich)

**Likely Routes of Exposure: Inhalation [Y] Skin Contact [Y] Skin Absorption [Y] Eye Contact [Y] Ingestion [N]**

**Inhalation:** N/Av

**Ingestion:** N/Av

**Skin Corrosion / Irritation:** May cause skin irritation in susceptible persons.

**Serious Eye Damage / Eye Irritation:** Vapors may cause irritation to the eyes, respiratory system and the skin.

**Respiratory or Skin Sensitization:** N/Av

**Acute Toxicity Estimates:** N/Av

**STOT - Single Exposure:** Not classified.

**Aspiration Toxicity:** May be fatal if swallowed and enters airways.

**STOT - Repeated Exposure:** Not classified.

**Carcinogenicity:**

<b>Naphthalene (CAS: 91-20-3 / EC: 202-049-5)</b>	
IARC group	2B - Possibly Carcinogenic to Humans
National Toxicity Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen
ACGIH Category	A4 - Not classifiable as a human carcinogen

**Reproductive Toxicity:** N/Av

**Mutagenic Effects:** Negative or equivocal results have been obtained in mutagenicity test using mammalian cells or animals. Results of AMES bacterial tests have generally been positive suggesting that genotoxic potential does not appear to be a significant factor in the toxicity of methylene chlorine.

**Sensitization:** No effects known.

**Target organs:** N/Av

**Section 12: Ecological Information**

<b>n-Butane (106-97-8)</b>	
Persistence and Degradability	Readily biodegradable in water.

Bioconcentration Factor	33.52
Log Pow	2.89
Bioaccumulation Potential	Low potential for bioaccumulation (Log Kow < 4).
Log Koc	1.641

#### Propane (74-98-6)

Persistence and Degradability	Readily biodegradable in water. Not applicable (gas). Photodegradation in the air.
BCF Fish	9 - 25 (BCF)
Log Pow	2.28 (Calculated)
Bioaccumulation Potential	Low potential for bioaccumulation (Log Kow < 4).

#### Isobutane (75-28-5)

Persistence and Degradability	Readily biodegradable in water. Biodegradable in the soil. Not applicable (gas).
BCF Fish	26.62
Log Pow	2.76
Bioaccumulation Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	1.545

#### Naphthalene (91-20-3)

LC50 Fish	1.6 mg/l Fathead Minnow - 96h
EC50 Daphnia	2.16 mg/l Water Flea - 48hr
Persistence and Degradability	Not readily biodegradable.
Biochemical Oxygen Demand	0 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	0.22 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	2.99 g O <sub>2</sub> /g substance
BCF Fish	23 - 168 (BCF; 8 weeks; Cyprinus carpio)
Log Pow	3.3 (Experimental value)
Bioaccumulation Potential	Low potential for bioaccumulation (BCF < 500).

#### 1,2,4-Trimethyl Benzene (95-63-6)

LC50 Fish	7.72 mg/l Fathead Minnow - 96h
EC50 Daphnia	3.6 mg/l Water Flea - 48hr
Persistence and Degradability	Biodegradable in the soil. Not readily biodegradable in water.
Chemical Oxygen Demand	0.44 g O <sub>2</sub> /g substance
BCF Fish	243 (Pimephales promelas, QSAR)
Log Pow	3.63 (Experimental value, KOWWIN)
Bioaccumulation Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	3.04 (log Koc, Calculated value)

#### Heavy Aromatic Solvent Naphtha (64742-94-5)

LC50 Fish	7.9 mg/l Fathead Minnow - 96h
EC50 Daphnia	8.6 mg/l Water Flea - 48hr

#### Nonylphenoxy Poly(Ethyleneoxy) Ethanol (68412-54-4)

LC50 Fish	7.9 mg/l Bluegill Sunfish - 96h
EC50 Daphnia	2.44 mg/l Water Flea - 48hr

### Section 13: Disposal Considerations

**Disposal Methods:** An aerosol container that does not contain a significant amount of liquid would meet the definition of scrap metal (40 CFR 261.1(c)(6) and would be exempt from RCRA regulation under

40 CFR 261.6(a)(3)(iv) if it is to be recycled. If containers are to be disposed of (not recycled) it must be managed under all applicable RCRA and state regulations. Collected rinsate materials from spills may be hazardous wastes, and therefore subject to local, state, and federal regulations. Chemical waste generators must determine whether discarded materials are classified as hazardous waste.

**Contaminated Packaging:** Dispose of in accordance with all applicable federal, state, and local regulations.

### Section 14: Transport Information

**DOT Regulations:**

PROPER SHIPPING NAME: Aerosols, Limited Quantity  
 HAZARD CLASS NUMBER and DESCRIPTION: 2.1  
 UN IDENTIFICATION NUMBER: UN 1950  
 PACKING GROUP: None  
 DOT LABEL(S) REQUIRED: None

### Section 15: Regulatory Information

**TSCA (Toxic Substances Control Act):**

*This product or mixture is not known to contain a chemical or chemicals subject to the export notification requirements of section 12(b) of the Toxic Substances Control Act (TSCA) and 40 CFR Part 707, subpart D*

**SARA Section 313:**

Naphthalene	CAS-No. 91-20-3	5 - 10%
1,2,4-Trimethyl Benzene	CAS-No. 95-63-6	1 - 5%
1,4-Dioxane	CAS-No. 123-91-1	0.001 - 0.01%
Ethylene Oxide	CAS-No. 75-21-8	0.001 - 0.01%
Xylene	CAS-No. 1330-20-7	0.1 - 1%
Ethyl Benzene	CAS-No. 100-41-4	0.01 - 0.1%

**CERCLA Reportable Quantity:**

Naphthalene	CAS-No. 91-20-3	100 lb
1,4-Dioxane	CAS-No. 123-91-1	100 lb
Ethylene Oxide	CAS-No. 75-21-8	10 lb
Xylene	CAS-No. 1330-20-7	100 lb
Ethyl Benzene	CAS-No. 100-41-4	1000 lb

**California Prop 65:**

Naphthalene (91-20-3)	Cancer	Yes
1,4-Dioxane (123-91-1)	Cancer	Yes
Ethylene Oxide (75-21-8)	Cancer	Yes
Ethyl Benzene (100-41-4)	Cancer	Yes
Ethylene Oxide (75-21-8)	Developmental Toxicity	Yes
Ethylene Oxide (75-21-8)	Reproductive Toxicity, Female	Yes
Ethylene Oxide (75-21-8)	Reproductive Toxicity, Male	Yes
Naphthalene (91-20-3)	No significance risk level (NSRL)	5.8 µg/day
1,4-Dioxane (123-91-1)	No significance risk level (NSRL)	30
Ethylene Oxide (75-21-8)	No significance risk level (NSRL)	2
Ethyl Benzene (100-41-4)	No significance risk level (NSRL)	54 µg/day

**State Right-to-Know Lists:**

n-Butane (106-97-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
Propane (74-98-6)	U.S. - New Jersey - Right to Know Hazardous Substance List



Isobutane (75-28-5)	U.S. - New Jersey - Right to Know Hazardous Substance List
Naphthalene (91-20-3)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
1,2,4-Trimethyl Benzene (95-63-6)	U.S. - New Jersey - Right to Know Hazardous Substance List
1,4-Dioxane (123-91-1)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Ethylene Oxide (75-21-8)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Xylene (1330-20-7)	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Ethyl Benzene (100-41-4)	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

### Section 16: Other Information

**Abbreviations:**

N/Av Not Available

N/Ap Not Applicable

N/D Not Determined

MSHA (Mine Safety and Health Administration)

NIOSH (National Institute for Occupational Safety and Health)

NFPA (National Fire Protection Association)

STOT (Specific Target Organ Toxicity)

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicity Program)

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act

SARA (The Superfund Amendments and Reauthorization Act)

WHMIS (Worker Hazardous Materials Information System)

**Date of Latest Revision:** March 01, 2021

**Revision:** 00

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