



Nonfood Compounds
Program Listed H2

Precise™ AW – Hydraulic Oils

Premium Quality Lubricating Oils

About Precise™ AW – Hydraulic Oils

Precise™ AW - Hydraulic Oils are premium quality lubricants made from highly refined base stocks. **Precise™ AW - Hydraulic Oils** are economically priced without sacrificing their exceptional performance and consistent quality characteristics. **Precise™ AW - Hydraulic Oils** are specifically formulated for operation under normal ambient temperature ranges. They are compounded with an advanced additive package to protect against wear, rust, foam and oxidation.

Applications

Precise™ AW – Hydraulic Oils are best suited for:

- Hydraulic applications (see “Performance Benefits”)
- High pressure or frequent overload scenarios
- General-purpose lubrication

For silver-plated hydraulic pump parts, use Precise™ Zinc Free Hydraulic Oils.

Available Packaging

These products are available in pails (19L/5 US Gal), drums (208L/55 US Gal), and bulk (1250L/330 US Gal) containers.

Discover

the  **exact** advantage
www.exactspecialty.com

Precise™ AW – Hydraulic Oils

Premium Quality Lubricating Oils

Performance Benefits

Precise™ AW – Hydraulic Oils meets or exceeds the requirements for industrial and mobile hydraulic systems which call for:

OEM	Specification
Vickers	▪ I-286-S, M-2950-S
Racine	▪ Variable volume vane pumps
DIN 51524	▪ Part 2
Jeffrey	▪ No. 87
US Steel	▪ 127, 136
General Motors	▪ LH-04-1, LH-06-1, LH-15-1
Dension	▪ HF-1, HF-2, HF-0
Cincinnati Milacron	▪ P-68, P-69, P-70
Lee-Norse	▪ 100-1
Ford	▪ M-6C32
BF Goodrich	▪ 0152
AFNOR	▪ E 48-603

Technically Speaking

ISO Viscosity Grade	22	32	46	68	100
NSF Registration Number	137105	137106	137107	137108	137109
Viscosity, cSt @ 40°C	22	32	46	68	100
Viscosity, cSt @ 100°C	4.3	5.3	6.7	8.6	11.2
Viscosity, SUS @ 100°F	106.3	150.5	214	315	463
Viscosity, SUS @ 210°F	40.4	43.6	48.1	54.4	63.5
Viscosity Index	98.5	98.3	98	97.5	97.1
Flash Point, °C (COC)	> 190	> 205	> 210	> 225	> 235
Flash Point, °F (COC)	> 375	> 400	> 430	> 450	> 460
Pour Point, °C/°F	-30/-22	-30/-22	-22/-8	-29/-21	-24/-12
Rust, Dist. Water	Pass	Pass	Pass	Pass	Pass
Specific Gravity, g/mL	0.850	0.860	0.864	0.868	0.874
Density, lbs./US Gal	7.07	7.16	7.19	7.22	7.27
ISO Viscosity Grade	150	220	320	460	
NSF Registration Number	137110	137111	137112	137113	
Viscosity, cSt @ 40°C	150	220	320	460	
Viscosity, cSt @ 100°C	14.7	18.9	24.2	30.6	
Viscosity, SUS @ 100°F	695	1019	1482	2131	
Viscosity, SUS @ 210°F	76.7	93.8	116.6	145.2	
Viscosity Index	96.8	96.5	96.2	96	
Flash Point, °C (COC)	> 240	> 245	> 250	> 250	
Flash Point, °F (COC)	> 465	> 470	> 480	> 480	
Pour Point, °C/°F	-20/-5	-18/0	-18/0	-18/0	
Rust, Dist. Water	Pass	Pass	Pass	Pass	
Specific Gravity, g/mL	0.878	0.884	0.888	0.894	
Density, lbs./US Gal	7.30	7.35	7.39	7.44	

These are typical figures and do not constitute a specification.

Handling and Safety Information

For information on the safe handling and use of this product, refer to its **Material Safety Data Sheet (MSDS)**, obtainable from www.exactspecialty.com



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SECTION 1: Product Information and Company Identification

Common Name	Precise™ AW – Hydraulic Oils
Product Code	E1300, E1305, E1310, E1315, E1320, E1325, E1330, E1335, E1340
Material Use	Premium Quality Lubricating Oils
Manufacturer	Commonwealth Oil Corporation 2080 Ferriss Rd. N., Harrow ON. NOR 1G0
In Case of Emergency	CANUTEC (613) 996-6666, collect 24 hours

SECTION 2: Composition and Information on Ingredients

Component	CAS Registry #	OSHA PEL	ACGIH TVL	Concentration, %
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This material is classified as not hazardous under OSHA regulations in the United States, the WHMIS in Canada and NOM-018-STPS-2000 in Mexico

- See SECTION 8 for Exposure Limits and SECTION 11 for Toxicological Data

SECTION 3: Hazards Information

Chemical Family	▪ Petroleum hydrocarbon
Physical State	▪ Liquid
Emergency Overview	▪ No specific hazard ▪ Use with care ▪ Follow good industrial hygiene practices
Routes of Entry	▪ Dermal and eye contact, inhalation, ingestion
Potential Acute Health Effects	▪ None known
Medical Conditions Aggravated By Overexposure	▪ None known
Overexposure Signs and Symptoms	▪ Not available

- See SECTION 11 for Toxicological Data

SECTION 4: First Aid Measures

Eye Contact	▪ Check for and remove any contact lenses. In case of contact, flush eyes with plenty of water for at least 20 minutes. Cold water may be used. Get medical attention should irritation persist.
Skin Contact	▪ Remove any contaminated clothing. Wash with soap and water. Get medical attention should irritation persist.
Inhalation	▪ If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Precise™ AW – Hydraulic Oils – Material Safety Data Sheet (MSDS)

Ingestion

- Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious patient. Should large amounts be swallowed, call a physician.
- Not available

Note to Physician

SECTION 5: Fire Fighting Measures

Flammability

Auto-Ignition Temperature

Flash Point (COC)

Flammable Limits

Hazardous Combustion Products

Fire Hazard in Presence of Various Substances

Explosion Hazard in Presence of Various Substances

Fire Fighting Media and Instructions

Protective Clothing (Fire)

Special Remarks on Fire Hazards

- Low hazard – combustible or burns at temperatures above flash point
 - Not available
 - >190°C (374°F) to > 250°C (482°F)
 - Not established
 - Products are smoke, carbon monoxide, carbon dioxide, and trace oxides of sulphur
 - Flammable in presence of open flames, spark, static discharge and at or above flash point
 - Risk in Presence of Mechanical Impact: Not available
 - Risk in Presence of Static Discharge: Not available
 - Small Fire: Use dry chemical powder
 - Large Fire: Use water spray, fog, or foam. Do not use water jet.
 - Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use MSHA/NIOSH approved respirator or equivalent
 - Do not use force stream as this could cause the fire to spread
 - SCBA should be worn by fire fighters
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SECTION 6: Accidental Release Measures

Small Spill and Leak

Large Spill and Leak

- Absorb with an inert material and put spilled material into appropriate waste disposal
 - Absorb with an inert material and put spilled material into appropriate waste disposal
 - Do not allow any potentially contaminated water, including rain water, runoff from fire fighting or spills, to enter any waterway, sewer or drain
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- See SECTION 8 for Personal Protective Equipment and SECTION 13 for Waste Disposal

SECTION 7: Handling and Storage

Handling

- Proper grounding procedures should be used as static charge may accumulate
- Avoid breathing vapors or spray mists
- Avoid contact with eyes, skin and clothing
- Always wash your hands after handling
- Do not cut, weld, heat or pressurize containers

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Storage

- Keep containers tightly closed
- Store in dry, cool, and ventilated areas
- Do not cut, weld, heat or pressurize empty containers
- Do not store near open flames or sources of ignition

SECTION 8: Exposure Controls and Personal Protection

Personal Protection

- | | |
|-----------------------------|--|
| Eyes | ▪ Safety glasses or goggles are advisable |
| Body | ▪ Lab coat or suitable protective clothing are advisable |
| Respiratory | ▪ Not required under normal and intended usage conditions |
| Hands | ▪ Chemical resistant or oil impervious gloves are advisable |
| Feet | ▪ Shoes (as required by work place) |
| Protection for Large Spills | ▪ Splash goggles, full suit, vapor respirator, boots, chemical resistant gloves |
| | ▪ Self contained breathing apparatus should be used to avoid inhalation of product |
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Engineering Controls

- Good ventilation should be sufficient to control airborne levels
- Local exhaust is recommended to control emissions at the source
- Mechanical ventilation should be used for confined areas
- Eyewash stations and safety showers should be proximal to the workstation

Exposure Limits

- ACGIH TLV (US and Canada)

Oil Mist – Severely Refined

- TLV-TWA: 5mg/m³
- Form: Mist

Consult your local authorities for your acceptable exposure limits

Precise™ AW – Hydraulic Oils – Material Safety Data Sheet (MSDS)

SECTION 9: Physical and Chemical Properties

Physical State	▪ Liquid
Appearance and Colour	▪ Clear, golden amber to dark brown
Odour	▪ Petroleum odour
pH	▪ N/A
Flash Point (COC)	▪ >190°C (374°F) to > 250°C (482°F)
Boiling/Condensation Point	▪ Not available
Pour Point	▪ -18/0 (°C/°F) to -30/-22 (°C/°F)
Freezing Point	▪ Not available
Specific Gravity	▪ 0.850 – 0.894g/mL (Water = 1g/mL)
Density	▪ 7.07 – 7.44 lbs./US Gal
Vapor Pressure	▪ Not available
Vapor Density	▪ Not available
% Volatility, by volume	▪ Not available
Evaporation Rate	▪ Not available
VOC	▪ N/A
Viscosity (cSt @ 40°C)	▪ 22, 32, 46, 68, 100, 150, 220, 320, 460
Solubility in Water	▪ Not soluble

SECTION 10: Stability and Reactivity

Stability and Reactivity	▪ Stable
Incompatibility with Various Substances	▪ Reactive with strong oxidizing agents
Hazardous Decomposition Products	▪ Fumes, smoke, carbon monoxide and oxides of sulfur in case of incomplete combustion
Hazardous Polymerization	▪ Will not occur

SECTION 11: Toxicological Information

Chronic Effects on Humans

Eyes	▪ Slightly irritating, but will not injure eye tissue
Skin	▪ Low toxicity. Prolonged exposure may irritate
Ingestion	▪ Low toxicity
Inhalation	▪ Negligible under normal conditions ▪ Elevated temperatures, or mechanical action may cause vapors, mists or fumes which may be irritating to the eyes, nose, throat and lungs

Other Effects

Acute Toxic Data	▪ Avoid breathing mist and fumes ▪ Proper ventilation should be utilized
Other Toxic Effects on Humans	▪ Low
Special Remarks on Toxicity to Animals	▪ Low
Special Remarks on Other Toxic Effects on Humans	▪ None reported

Precise™ AW – Hydraulic Oils – Material Safety Data Sheet (MSDS)

SECTION 12: Ecological Information

BOD and COD	▪ Not established
Biodegradability/OECD	▪ Not established
Mobility	▪ Not established
Products of Degradation	▪ Not established
Products of Biodegradation	▪ Not established
Special Remarks on the Products of Biodegradation	▪ Not established

SECTION 13: Disposal Considerations

- Wastes should be disposed of in accordance to local, federal and state environmental control regulations

SECTION 14: Transport Information

Regulatory Information	UN Number	Proper Shipping Name	Class	Packing Group	Label	Additional Information
United States (DOT)	Not regulated	-	-	-	-	-
Canada (TDG)	Not regulated	-	-	-	-	-
Mexico (NOM-004-SCT2-1994)	Not regulated	-	-	-	-	-
IMDG Code	Not regulated	-	-	-	-	-
IATADGR Class	Not regulated	-	-	-	-	-

- NAERG (North American Emergency Response Guide): N/A

SECTION 15: Regulatory Information

United States: Federal Regulations

- **TSCA 8(b) Inventory:** All products are listed or exempt
- **SARA 302/304/311/312 Extremely Hazardous Substances:** No products found
- **SARA 302/304 Emergency Planning and Notification:** No products found
- **SARA 302/304/311/312 Hazardous Chemicals:** No products found
- **SARA 311/312 MSDS Distribution – Chemical Inventory – Hazard Identification:** No products found
- **Clean Water Act (CWA) 307:** No products found
- **Clean Water Act (CWA) 311:** No products found
- **Clean Air Act (CAA) 112 Accidental Release Prevention:** No products found
- **Clean Air Act (CAA) 112 Regulated Flammable Substances:** No products found
- **Clean Air Act (CAA) 112 Regulated Toxic Substances:** No products found

Precise™ AW – Hydraulic Oils – Material Safety Data Sheet (MSDS)

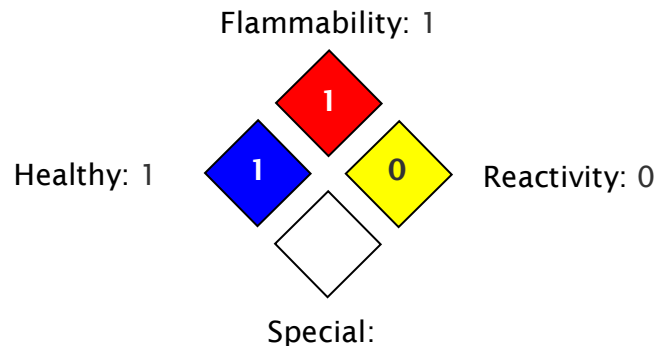
United States: State Regulations

- California Prop. 65: No products found

Canada: WHMIS

- Not controlled under WHMIS
- CEPA DSL: All products are listed or exempt
- "This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all of the information required by the *Controlled Products Regulations*."

Mexico: Classification



SECTION 16: Other Information

Label Requirements

- "Use with care"
- "Use as directed"

Hazardous Material Information System (USA):

Health	1
Fire Hazard	1
Reactivity	0
Personal Protection	B

National Fire Protection Association (USA):

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Note to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Authored By: Exact™ Specialty Products Technical Services Department, (519) 738-3503