



Clarity EliteSyn AW

Replaces Clarity Synthetic Hydraulic Oil AW

High performance, high viscosity index, ashless hydraulic oils

Product description

Clarity EliteSyn AW is a range of premium high viscosity index (VI) ashless, zinc-free hydraulic oils, designed to provide maximum protection and improved productivity and fuel efficiency in both mobile and stationary hydraulic equipment in industrial applications, as well as in environmentally sensitive areas.

Formulated with premium base oils and high performance ashless (zinc-free) additive technology that meets or exceeds major vane, piston, and gear pump manufacturer's requirements.

Clarity Elitesyn AW is used in applications where a zinc-free hydraulic oil is required to help minimize the environmental impact.

For environmentally sensitive areas requiring environmentally acceptable lubricants (EALs), Clarity Bio Elitesyn AW series should be used.

Clarity EliteSyn AW replaces Clarity Synthetic Hydraulic Oil AW 32, 46, 68.

Customer benefits

- High viscosity index helps maintain a high operating temperature window to provide year-round performance.
- Good thermal stability helps to minimise varnish and sludge formation, to maintain product viscosity and longer oil life.
- Effective hydrolytic stability helps prevent corrosive wear to help optimize productivity and equipment uptime.
- In laboratory efficiency testing, Clarity Elitesyn AW provided up to 12% efficiency improvement on hydraulic pump efficiency when compared to a typical monograde hydraulic oil (lower VI product with VI<105).

Product highlights

- **Promotes performance across broad temperature ranges.**
- **Helps minimise varnish and sludge for longer oil life.**
- **Formulated to prevent corrosive wear, helping optimize productivity and uptime.**
- **Offers up to 12% efficiency improvement in lab tests.**

Selected specification standards include:

ASTM	DIN
Eaton	ISO
JCMAS	Parker Hannifan (Dennison)

Applications

- Clarity EliteSyn AW hydraulic oils are designed for effective performance in applications involving:

ISO Grade	32	46	68
Mobile and stationary hydraulic vane-, piston-, and gear-type pumps	X	X	X
High performance industrial applications where pressures may exceed 5000 psi	X	X	X
Servo-valves using multi-metal components	X	X	X

Clarity EliteSyn AW is designed for environmentally sensitive applications, including:

- Marine
- Agriculture
- Forestry
- Mining
- Construction

Clarity EliteSyn AW is highly recommended for high pressure systems:

- Injection moulding
- Mobile equipment

For low temperature startups, care must be taken to ensure that the hydraulic oil flows freely into the pump and no cavitation occurs. Otherwise, subjecting a pump to cavitation will cause damage to critical components.

Careful attention to the oil's viscosity at low temperature is the key to ensuring adequate flow and preventing cavitation.

Please consult with the original equipment manufacturers (OEMs) of your equipment to determine the maximum viscosity allowed during startup under no load conditions.

The recommended maximum viscosity under load conditions for hydraulic oil as specified by most pump OEMs is 860 cSt. For cold starts under no-load conditions, the startup viscosity can be much higher than 860 cSt. No-load running conditions should be applied until the equipment has warmed up to the maximum startup viscosity under load as recommended by the OEM, and full load operation can then be applied when the oil viscosity falls below this recommended viscosity under load.

Refer to the service manual of the equipment to ensure that the minimum fluid viscosity requirements are met at the highest operating temperature. Please consult with the equipment manufacturer (OEM) if equipment is operating outside normal operation conditions.

Compatibility testing should be conducted if Clarity EliteSyn AW is used to top up an existing system.

Standard recommendation is to always drain and flush the system.

Approvals, performance and suitable for use

Approvals and performance			
ISO Grade	32	46	68
Parker Hannifin (Dennison) HF-0, HF-1, HF-2	A	A	A
Eaton E-FDGN-TB002-E (specification for top tier mineral based anti-wear hydraulic fluids; ISO 10-150)	A	A	A
ASTM D6158 HV	M	M	M
DIN 51524/2 HVLP	M	M	M
ISO 11158 L-HV	M	M	M
JCMAS HK	M	M	M

A: Approved for

M: Performance: Meets or exceeds requirements

Product maintenance and handling

Avoid any spillage of used and unused product to the environment.

Product residue and package/container should be disposed of in dedicated collection points.

Typical test data				
Test	Test Methods	Results		
Viscosity Grade		32	46	68
Typical shelf life: 60 months from date of filling indicated on the product label				
Appearance	Visual	Bright & Clear	Bright & Clear	Bright & Clear
Color	ASTM D1500	1	1	1
Density at 15°C, kg/l	ASTM D4052	0.8455	0.8475	0.8472
Kinematic Viscosity at -20°C, mm ² /s	ASTM D445	1155	2110	4928
Kinematic Viscosity at 0°C, mm ² /s	ASTM D445	220.5	356	633.6
Kinematic Viscosity at 40°C, mm ² /s	ASTM D445	33.01	46.27	68.04
Kinematic Viscosity at 100°C, mm ² /s	ASTM D445	7.10	9.15	11.5
Viscosity Index	ASTM D2270	191	184	164
Pour point, °C	ASTM D97	-52	-47	-44
Flash point COC, °C	ASTM D92	216	234	246
Foam Seq I, foam tendency/stability ml	ASTM D892	10/0	0/0	10/0
Foam Seq II, foam tendency/stability ml	ASTM D892	20/0	20/0	10/0
Foam Seq III, foam tendency/stability ml	ASTM D892	10/0	0/0	0/0
Water separation, oil/water/emulsion, min		40/37/3(5)	40/40/0(25)	40/37/3(20)
Air release at 50°C, min		1.1	1.88	5.22

The typical test data set out above does not constitute a specification. It is indicative only and can be affected by allowable production tolerances. Chevron may modify this test data. Modified data will supersede all previous data, so please ensure you refer to the latest version of this Product Data Sheet (PDS).

Disclaimer: Data provided in this Product Data Sheet (PDS) is based on standard tests under laboratory conditions and is indicative only. This product should not be used for any purpose other than those expressly set out in this PDS. The user has sole responsibility for verifying that this product is suitable for the user's intended application. Neither Chevron nor its subsidiaries (i) make any warranty or representation as to the accuracy or completeness of this PDS; and/or (ii) accept liability for any loss or damage suffered as a result of the use of this product other than in accordance with the terms of this PDS.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

When disposing of used product, take care to protect the environment and follow local legislation.

Safety Data Sheets (SDS's) are available for all Chevron products. If you require a SDS or any further information regarding a Chevron product, please contact your local sales office or see <http://europe.chevronlubricants.com>.

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