

Typical chemical and physical properties

Exad AW 25 is an antiwear additive for formulating aqueous metal working fluids.

It contains a blend of surfactants, coupling agents and organic amides.

Appearance	Yellow to amber clear liquid
Viscosity at 25 °C	< 100 mPa.s
Density at 25 °C	1.17 g/cm ³
pH	5 to 7
Solubility	
Water	soluble
Mineral oil	insoluble
Biodegradation	Readily biodegradable (OECD 301)

This information is intended as a guideline only. For specifications please consult the Certificate of Analyses.

Applications and typical treat level recommended

Metal working fluids (MWFs)	1 to 5 %
- emulsions, water based systems, water based PAG systems	
Cutting and grinding fluids (water based)	
Hydraulic fluids (HF-C, HF-A, water based systems including PAG)	
De-icing fluids	
Automotive coolants	

Benefits

- Easy to handle liquid
- Does not contain phosphorus, sulphur or halogens
- Offers excellent solubility in water
- It does not affect paints and coatings (no blistering or stripping of the coating is observed).
- The additive can be added to media, which exhibit pH range between 4 to 13.

ADDAPT[®] Exad AW 25

Safety and Handling	Please read Material Safety Data Sheet (MSDS) before handling.
Product Specification	This information is available on request through our local representative.
Packaging	This information is available on request through our local representative.

Quality Policy The objective of our quality policy is the continuous fulfillment of the internal and external requirements agreed upon with our partners with regards to everybody's performance.

The Quality System of ADDAPT[®] Chemicals BV is based on the principles of the NEN-EN-ISO-Standard 9001 : 2015.

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ADDAPT® Exad AW 25

Performance benefits: Metal surface protection

Wear inhibition

Table 1: Reichert values water / Exad AW 25

Medium	Noise	Wear	Bath-temperature
Water	100	38	70 °C
5% Exad AW 25	14	12	40 °C
10% Exad AW 25	10	12	34 °C
20% Exad AW 25	9	10	34 °C
30% Exad AW 25	8	10	32 °C
2.5% Exad AW 25 15% additives	7	9	36 °C
5% Reference (boric containing fluid)	14	28	50 °C

Reichert wear test

(15 N, 100 m, room temp.)

Note: A new ring and pin was used to measure the distilled water alone. With the “run-in” ring a new pin was used to measure the EP/AW performance of the test fluids.

a. Reichert of formulated systems.

- ✓ Only Exad AW 25 containing (Cool A)
 - ✓ Semi-synthetic formulations (Cool B)
 - ✓ Synthetic formulation (Cool Syn C)
- Cool B is an oil in water system
Cool Syn C is based on PAG-system

Table 2. Formulation

System	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	6 (%)	7 (%)
Cool A	95	90					
Exad AW 25	5	10					
Cool B			95	90			
Exad AW 25			5	10			
Cool Syn C					95	90	80
Exad AW 25					5	10	20
Total	100	100	100	100	100	100	100

Table 3: Reichert values of systems displayed in table 3.

Item	1	2	3	4	5	6	7
Solubility in concentrate	G	G	G	G	G	G	G
Change of concentrate	0	0	0	0	0	0	0
Solubility	OK	OK	OK	OK	OK	OK	OK
Stability	OK	OK	OK	OK	OK	OK	OK
PH value at 1:10	9.4	9.4	9.5	9.5	9.5	9.5	9.5
PH- value at 1:20	9.3	9.3	9.3	9.5	9.4	9.4	9.4
Corrosion protection at 2%	OK	OK	OK	OK	OK	OK	OK
Corrosion protection at 3%	OK	OK	OK	OK	OK	OK	OK
RFW 2% (mm2)	22	18	22	17	12	9	7
RFW 3% (mm2)	20	17	20	19	10	8	7