# **Shell Ensis DW Fluids**

### Corrosion preventative fluids

Shell Ensis DW Fluids are temporary corrosion preventatives for metal surfaces likely to corrode in storage or use. Ensis DW Fluids are water-displacing solvent based rust inhibitors that leave temporary protective films on metal surfaces. They protect metal parts from the damaging effects of moisture, air, detergents & other contaminants.

They are very effective rust inhibitors for protecting machined parts in storage and coating parts exiting washers or after rust stripping.

#### **Shell Ensis DW 155 & 162**

Both these products leave very thin soft dry protective films on surfaces requiring temporary protection. They are ideal for use as inter-stage dewatering fluids between machining operations where components may be subjected to indoor storage of up to a month. The dewatering action is not degraded by repeated contact with water. Extends bath life.

The dry non-sticky film prevents stacked parts sticking together. Effective in neutralising finger prints.

Use Ensis DW 162 where you require even more economical covering capacity and Ensis DW 155 for faster drying times & minimal vapour generation.

#### Shell Ensis DW 655 & 662

Both these products leave thin dry soft dry protective films on surfaces requiring temporary protection. They are ideal for use as inter-stage dewatering fluids between machining operations where components may be subjected to indoor storage of up to six months. The dewatering action is not degraded by repeated contact with water. Extends bath life.

The dry non-sticky film prevents stacked parts sticking together. Effective in neutralising finger prints.

Use Ensis DW 662 where you require even more economical covering capacity and Ensis DW 655 for faster drying times & minimal vapour generation.

#### Shell Ensis DW 1255 & 1262

Both these products leave thin oily protective films on surfaces requiring medium-term temporary protection. They are premium quality dewatering type rust preventives with good penetrating ability. Extends bath life. Dries fast to a self-healing film. Effective in neutralising finger prints. They are excellent for

final packaging protection with indoor protection of up to 12 months & outdoor undercover protection of up to 6 months (Ensis DW 1255) and to 3 months (Ensis DW 1262).

Use Ensis DW 1262 where you require even more economical covering capacity and Ensis DW 1255 for faster drying times & minimal vapour generation.

#### Shell Ensis DW 3655 & 3662

Both these products leave heavy-duty waxy films that offer the longest-term rust protection of all the products in the Ensis range. They are premium quality dewatering type rust preventives with good coverage. Effective in neutralising finger prints. Resists cracking & peeling.

They are excellent for long-term indoor protection of up to 36 months, outdoor undercover protection of up to 24 months & uncovered outdoor protection of 12 months.

Use Ensis DW 3662 where you require excellent covering capacity and Ensis DW 3655 for faster drying times.

#### **Application**

Shell Ensis DW Fluids can be applied by dipping, brushing or spraying.

#### Film Removal

Protective coatings may be removed by using conventional degreasing methods such as aqueous alkaline cleaners or neat solvents.

#### **Health & Safety**

Shell Ensis DW Fluids are unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

After skin contact, wash immediately with soap and water.

## **Typical Physical Characteristics**

Ensis			DW 155	DW 655	DW 1255	DW 3655	DW 162	DW 662	DW 1262	DW 3662
Film Characteristics										
ISO Standard			ISO-L-RA	ISO-L-REE	ISO-L-REE	ISO-L-RFF/RM	ISO-L-RA	ISO-L-REE	ISO-L-REE	ISO-L-RFF/RM
Nature			Thin waxy film	Waxy film	Oily / waxy	Waxy	Thin / waxy	Waxy	Oily / waxy	Waxy
Thickness	μm		0.3 - 0.5	0.4 - 0.6	2.0 - 2.5	110 - 1 <i>5</i> 0	0.3 - 0.5	0.4 - 0.6	1.5 - 2.0	<i>7</i> 0 - 90
Physical Characteristics										
Density at 15 °C	Kg/m <sup>3</sup>	ISO 12185	772	774	795	880	785	787	801	880
<b>Dewatering Properties</b>	_		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Kinematic Viscosity at 20 °	$mm^2/s$	ISO 3104	1.4	1.5	2.5	N/A	2	2	3	N/A
Flash point (Abel CC)	°C	ISO 13736	40	40	41	42	69	69	68	66
Consumption	$g/m^2$		6-8	6-8	8-10	*220-250	5-7	5-7	6-8	*140-160
Drying Time at 20°C	Minutes		30 - 60	30 - 60	30 - 60	30 - 60	60 - 90	60 - 90	60 - 90	60 - 90
dependent on film										
thickness and conditions										
Duration of Protection										
Indoors	months		1	6	12	36	1	6	12	36
Outdoors Covered	months		0	0	6	24	0	0	3	24
Outdoors Uncovered	months		0	0	0	12	0	0	0	12

<sup>\*</sup> determined at 37 ℃