



Material Safety Data Sheet

U.S. Department of Labor

May be used to comply with Occupational Safety and Health Administration OSHA's
Hazard Communication Standard, (Non-Mandatory Form) 29 CFR 1910. 1200.
Standard must be Form Approved consulted for specific requirements. OMB No.1218-0072

Section 1 - IDENTITY INFORMATION

Product Name (as used on label and list)	DUO (Aqua Oil), Holbein Water Soluble Oil Color
Manufacturer	HOLBEIN Works, Ltd.
Address	1-3-14, Hishiya-nishi, Higashi-osaka-shi, OSAKA 577-0807 JAPAN
Telephone Number for information	81-6-6723-1555
Emergency Telephone Number	81-72-985-1223
Date Prepared	2013-5-31
Preparer	ALAKI, Yutaka

Section 2- HAZARD IDENTIFICATION

This product is not classified as dangerous for supply or conveyance.
No toxics or toxic off-gassing is present.

Section 3- COMPOSITION / INGREDIENTS

Components (Specific Chemical Identity, Common Name(s))

Pigment *	: shown on table of catalog	
Vegetable Oil *, **	: CH ₂ —OCOR	
	CH—OCOR	CAS No. 8001-26-1
		or others
	CH ₂ —OCOR	
Silicone Dioxide (Modeling agent)***	: SiO ₂	
Metallic Soap (Drier)****	: ex; (RCOO) ₂ Co	CAS No. 61789-51-3
Polyoxyethylene Alkyl Ether (Surface Activator):	—	CAS No. 68131-40-8

* : Main ingredient

** : Linseed oil, Poppy oil or Safflower Oil (Triglyceride of Linolic acid, Linolenic acid Oleic acid or Palmitic acid)

*** : In some colors, may be altered with Calcium Carbonate or no body-pigment.

**** : Naphthenate or Octoate of Cobalt, Manganese or Zirconium. In some colors, not applied.

Section 4- FIRST AID MEASURES

Eyes :	In case of eye contact, rinse with plenty of water and if necessary consult an eye specialist.
Ingestion :	Drink some glasses of water and induce vomiting. If CL is shown on label, confirm name of pigment with appendix of this sheet and seek medical attention.
Skin Contact :	Wash with mild soap and water.
Inhalation :	N/A

Section 5- FIRE AND EXPLOSION HAZARD DATA

Flammability : Flammable
 Flash Point : 306°C (As Linseed Oil. Not examined about products)
 Combustion Products: Carbon monoxide and oxides of metals
 Extinguishing Media : Water mist, Foam, Dry powder, CO2
 Special Procedures: Firefighters should wear full-body protection & SCBA
 Unusal Fire and Explosion Hazards : Oil dries by oxygen. Rags or waste soaked with oil may spontaneously catch fire if improperly discarded. Not exclusive.

Section 6- ACCIDENTAL RELEASE MEASURES

Wipe out.

Section 7- HANDLING AND STORAGE

Precautions to Be Taken in Handling and Storing :
 Avoid prolonged or repeated contact with skin and eyes. Use soap and water for clean-up.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Especially none

Section 9 - PHYSICAL / CHEMICAL CHARACTERISTICS

Appearance : Colored paste.
 Odor : Oily
 Specific Gravity (H2O = 1) : 1.3~2.3 (Av.1.82)
 Boilling Point : N/A
 pH : N/A
 Solubility in Water : Soluble

Section 10 - STABILITY AND REACTIVITY DATA

Stability : Stable under normal state
 Byproducts : Carbon dioxide and oxides of metals in case of fire.
 Incompatibility (Materials to Avoid) : None
 Hazardous Decomposition or Byproducts :
 No thermal decomposition when stored and handled correctly.
 Corrosive Behavior : None

Section 11 - TOXICOLOGICAL INFORMATION

Primary Routes of Entry : Dermal, eye contact, swallowing, ingestion
 Oral Toxicity : Depends on pigment.
 Even if hazardous, doesn't act acutely.
 In case of swallowing, drink plenty of water. Induce vomiting.
 If you feel unwell, seek medical advice.

The harmful pigments are noted on catalog as follows ;

Cadmium group and Naples Yellow (except Naples Yellow Light) : Contains soluble Cadmium which may be harmful by ingestion. Exposure may cause damage to the kidneys or testes or harm to the developing fetus. Inhalation may cause lung damage.

Cobalt group, Cerulean Blue, Verditer Blue and Manganese Blue Nova :

Contains soluble Cobalt which may be harmful if swallowed.
Exposure may damage heart or lungs.

Effects of Acute Exposure : None known
Effects of Chronic Exposure : None known

Skin irritation : Usually non irritant. Upon skin contact, wash with soap or other non-irritating cleansing agents.

Eye irritation : Usually non irritant. In case of eye contact, rinse with plenty of water and consult an eye specialist if necessary.

Carcinogenicity : N/A. DUO does not react as carcinogen.

Sensitization : Not expected

Mutagenicity : N/A

Teratogenicity : None known

Section 12 - ECOLOGICAL INFORMATION

No suitable information

Section 13- DISPOSAL CONSIDERATIONS

Disposal Considerations : As being filled in aluminium tube, DUO may be treated as incombustible according to to all federal, state or governmental regulations.
Stained cloths or papers which has been used to wipe or so on are so flammable that they had better been wetted with water.

Section 14- TRANSPORT INFORMATION

Hazard Class : Non-regulated
UN Class : Not Applicable (N/A)

Section 15- REGULATORY INFORMATION

Conforms to ACMI, Art & Creative Materials Institute, under ASTM D 4236.

Section 16- OTHER INFORMATION

Notice : The information of this sheet is based on the present state of our knowledge and does not therefore guarantee certain properties.

Appendix

Table COLOR INFORMATION

	Cd	Cadmium		27	227	Imidazolone Yellow Light	-	
	Co	Cobalt		88	288	Indanthrene Blue	-	
	Se-Cd	Selenium-Cadmium		34	234	Indian Yellow	-	
				74	274	Indigo	-	
	AP	Approved Product : Contain no materials in sufficient quantities to be toxic or injurious to humans.		150	350	Ivory Black	-	
				23	223	Jaune Brillant	-	
	CL	Cautionary Label : Any known health risks and with information on the safe and proper use of these materials		102	302	Lavender	-	
				50	250	Leaf Green	-	
				28	228	Lemon Yellow	-	
				100	300	Light Magenta	-	
				101	301	Lilac	-	
#6	#9	NAME	Hazardous ingredient	174	374	Luminous Green	-	
1	201	Alizarin Crimson	-	173	373	Luminous Lemon	-	
9	209	Antraquinone Red	-	170	370	Luminous Opera	-	
30	230	Aureolin Hue	-	172	372	Luminous Orange	-	
39	239	Benzidine Yellow	-	175	375	Luminous Violet	-	
16	216	Brilliant Pink	-	78	278	Manganese Blue Nova	Co	AP
120	320	Brown Pink	-	95	295	Mauve	-	
118	318	Burnt Sienna	-	92	292	Mineral Violet	-	
117	317	Burnt Umber	-	12	212	Naphthol Red	-	
57	257	Cadmium Green	Cd	21	221	Naples Yellow	Se-Cd	AP
47	247	Cadmium Green Deep Hue	-	22	222	Naples Yellow Light	-	
46	246	Cadmium Green Hue	-	77	277	Navy Blue	-	
56	256	Cadmium Green Light	Cd	51	251	Olive Green	-	
45	245	Cadmium Green Light Hue	-	136	336	Payne's Grey	-	
18	218	Cadmium Orange	Se-Cd	160	360	Permanent White	-	
13	213	Cadmium Red	Se-Cd	87	287	Phthalo Blue	-	
14	214	Cadmium Red Deep	Se-Cd	52	252	Phthalo Green	-	
6	206	Cadmium Red Deep Hue	-	53	253	Phthalo Green Yellow Shade	-	
5	205	Cadmium Red Hue	-	73	273	Prussian Blue	-	
7	207	Cadmium Red Purple Hue	-	49	249	Prussian Green	-	
37	237	Cadmium Yellow	Cd	112	312	Quinacridone Gold	-	
38	238	Cadmium Yellow Deep	Se-Cd	10	210	Quinacridone Red	-	
33	233	Cadmium Yellow Deep Hue	-	11	211	Quinacridone Scarlet	-	
32	232	Cadmium Yellow Hue	-	93	293	Quinacridone Violet	-	
36	236	Cadmium Yellow Lemon	Cd	116	316	Raw Sienna	-	
31	231	Cadmium Yellow Light Hue	-	115	315	Raw Umber	-	
162	362	Ceramic White	-	3	203	Rose Dore	-	
80	280	Cerulean Blue	Co	2	202	Rose Madder	-	
71	271	Cerulean Blue Hue	-	97	297	Rose Violet	-	
81	281	Cobalt Blue	Co	44	244	Sap Green	-	
75	275	Cobalt Blue Hue	-	119	319	Sepia	-	
55	255	Cobalt Green Deep	Co	58	258	Shadow Green	-	
54	254	Cobalt Green Light	Co	152	352	Spinel Black	-	
82	282	Cobalt Turquoise	Co	111	311	Terra Rosa	-	
91	291	Cobalt Violet	Co	43	243	Terre Verte Hue	-	
15	215	Coral Red	-	161	361	Titanium White	-	
94	294	Dioxazine Violet	-	76	276	Turquoise Blue	-	
41	241	Emerald Green Nova	-	83	283	Ultramarine Deep	-	
35	235	Greenish Yellow	-	72	272	Ultramarine Light	-	
146	346	Grey Of Grey	-	84	284	Verditer Blue	Co	AP
85	285	Horizon Blue	-	8	208	Vermilion Hue	-	
61	261	Ice Green	-	40	240	Viridian Hue	-	
113	313	Imidazolone Brown	-	48	248	Yellow Green	-	
19	219	Imidazolone Orange	-	29	229	Yellow Ochre	-	
26	226	Imidazolone Yellow	-	25	225	Yellow Ochre Natural	-	