ONYX CHEMICAL RESISTIVITY

Markforged

Material	Onyx	ABS	Delta
Acetone	A	D	+++
Ammonium Carbonate Aq.	A	*	
Ammonium Chloride Aq.	A	*	
Amyl Acetate	A	D	+++
Barlium Chloride Aq.	A	*	
Benzene	A	D	+++
Boric Acid Aq.	A	*	
Camphor	A	*	
Carbon Tetrachloride	A	D	+++
Chrome Alum Aq.	A	*	
Creosote	A	*	
Cyclohexanone	A	*	
Detergents, Organic	A	*	
Dibutylphthalate	A	*	
Diesel Oil	A	*	
Dioxan	A	*	
Ether, Diethyl	A	*	
Ethyl Acetate	A	D	+++
Freon 12 (Arcton 12)	A	*	
Glycerine	A	A	=
Heptane	A	*	
Linseed Oil	A	*	
Lubricating Oils (Petroleum)	A	*	
Magnesium Chloride Aq.	A	*	
Methyl Acetate	A	*	
Methyl Ethyl Ketone	A	D	+++
Mineral Oils	A	*	
Naphthalene	A	D	+++
Nickel Sulphate Aq.	A	*	
Oleic Acid	A	*	
Paraffin	A	*	
Petrol	A	*	
Potassium Bicarb. Aq.	A	*	
Potassium Chloride Aq.	A	A	=
Potassium Ferrocyanide Aq.	A	*	
Propane Gas	A	*	
Salicylic Acid	A	*	
Silicone Fluids	A	D	+++
Silver Nitrate	A	*	
Soap Solutions	A	B	+
Sodium Bicarbonate Aq.	A	*	
Sodium Nitrate Aq.	A	*	
Stearic Acid	A	*	
Styrene (Monomer)	A	*	
Tallow	A	*	
Toluene	A	D	+++
Transformer Oil	A	*	
Triethanolamine	A	*	
Turpentine	A	D	+++
Urea	A	*	
Vaseline	A	B	+
Vegetable Oils	A	C	++
Vinyl Chloride	A	*	
Water	A	A	
Wax (Molten)	A	C	++
White Spirit	A	*	
Acetaldehyde Aq.	B	D	++

Material (Continued)	Onyx	ABS	Delta
Alcohols, Aliphatic	B	*	
Butanol	B	*	
Butyric Acid Aq.	B	*	
Cyclohexanol	B	*	
Ethylene Dichloride	B	D	++
Ethylene Glycol Aq.	B	*	
Formaldehyde Aq.	B	*	
Formic Acid Aq.	B	*	
Hydrogen Sulphide Aq.	B	*	
Hydroquinone	B	*	
Isopropylalcohol	B	C	+
Lead Acetate Aq.	B	*	
Phthalic Acid Aq.	B	*	
Sodium Acetate Aq.	B	*	
Sulphur Dioxide (Dry Gas)	B	D	++
Tar	B	*	
Trichlorethylene	B	*	
Acetic Acid Aq.	C	*	
Ammonia Gas	C	*	
Anillne	C	*	
Antimony Trichoride Aq.	C	*	
Bleaching Lye	C	C	=
Butyric Acid	C	D	+
Chromic Acid Aq.	C	*	
Citric Acid Aq.	C	B	-
Ferrous Chloride Aq.	C	*	
Hydrofluoric Acid Aq	C	*	
Hydrogen Peroxide Aq.	C	*	
Lactic Acid Aq.	C	*	
Methyl Chloride	C	*	
Nitric Acid Aq.	C	B	-
Oxalic Acid Aq.	C	*	
Ozone	C	*	
Stannic Chloride Aq.	C	*	
Sulphuric Acid Aq.	C	B	
Vinegar	C	A	--
Zinc Chloride Aq.	C	*	
Benzene Sulphonic Acid	D	*	
Bromine Aq.	D	*	
Calcium Hypochlorite	D	*	
Chloral Hydrate	D	*	
Chlorine Aq.	D	*	
Chloroform	D	D	=
Chlorosulphonic Acid Aq.	D	*	
Cresylic Acid	D	*	
Fluorine	D	*	
Hydrobromic Acid Aq.	D	A	---
Hydrogen Peroxide Aq.	D	*	
Iodine (in Pot Iodine) Aq.	D	*	
Perchloric Acid Aq.	D	*	
Phenol Aq.	D	*	
Phosphoric Acid Aq.	D	*	
Chlorine Bleach	D	*	
Sulphurous Acid Aq.	D	*	
Xylene	D	D	=

LEGEND

A - No Attack, possibly slight absorption. Negligible effect on mechanical properties.
B - Slight attack by absorption. Some swelling and a small reduction in mechanical likely.
C - Moderate attack of appreciable absorption. Material has limited life.
D - Material will decompose or dissolve in a short time.
SOURCE: www.plasticsintl.com/plastics_chemical_resistence_chart.html

The information in this chart has been collected from reputable sources, but applies only generally to nylon and ABS (and is not specific to any formulation or to composite materials). However, because resistances can be affected by concentration, temperature, other chemicals and many environmental factors, this information is only a general guide, and testing under the specific conditions of your application is necessary. Carbon fiber encapsulated in Onyx material is highly inert and typically isolated from the environment by the nylon matrix, but in exceptional cases where a chemical or environment may affect the embedded carbon fiber, specific testing will be necessary.

Markforged does not warrant (neither express nor implied) that the information in this chart is accurate or complete or that any material is suitable for any purpose.