MOTOMUCK cleaner
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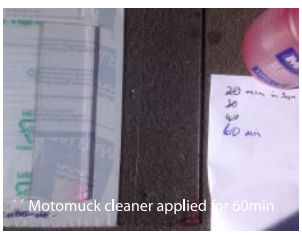
Motomuck Cleaner on Polycarbonate Motorcycle screens.

Due to some isolated incidents where about 4 screens over the last 4 years have been reported as being damaged after washing with Motomuck Cleaner, we did some testing to isolate this problem. Motomuck Cleaner is a neutral based safe cleaner, so this was a very important issue for us.

Our original plastics test was done quite a few years ago, and a video was made on Youtube to show the results.
Go to: https://www.youtube.com/watch?v=u-nrRWHZ9wI (or go to youtube and search Motomuck Plastics.)

Further testing after another complaint showed Motomuck cleaner could be left on plexiglass and Polycarbonate for an hour without any damage.
Go To: https://www.facebook.com/permalink.php?story_fbid=1060051454055031&id=118972658162920


Motomuck cleaner applied for 60min


As good as new after 60min of Motomuck

As we could still not replicate this problem we aquired the damaged screen from one client and did some tests on the undamaged portions. See below.

TEST 1: Washing Motorcycle screen under Normal Conditions


MOTOMUCK Cleaner applied

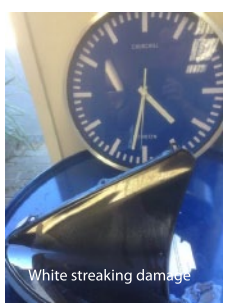

10 minutes later


No damage to screen

TEST 2: Washing Motorcycle screen in the sun


Motomuck cleaner applied


Left in sun for 10 min.


White streaking damage

OUTCOME: If washing a street bike, don't use MOTOMUCK cleaner on the polycarbonate screen if it has been standing in the sunlight and heated up. It can have a reaction with some isolated coatings that are on some polycarbonates. Even if you have put the motorcycle in the shade when applying cleaner, if screen is still hot there is limited possibility of damage to the coating.

Extra Info on Windshields

Windshields for motorcycles are made from either polycarbonate (Lexan) or acrylic (Plexiglas). Each type of plastic has advantages and disadvantages.

Polycarbonate is an extremely strong plastic. Polycarbonate is about as transparent as glass. Polycarbonate cuts and forms easily at both room temperature and at higher temperatures.
For machining purposes, you can work with polycarbonate pretty much the same as you would aluminum. Polycarbonate has a major drawback for windshield use: polycarbonate picks up water from the air. The water eventually makes the polycarbonate cloudy. This water will form bubbles if you heat the polycarbonate to forming temperatures. So, before you can form polycarbonate, first you have to place it in a drying oven at about 200° for about 12 hours.
Because of this, only companies that manufacture polycarbonate make windshields. Polycarbonate is sensitive to ammonia, so glass cleaners like Windex should not be used on polycarbonate.
Polycarbonate windshields need a coating to protect them from chemicals and prevent them from absorbing water from the air. This optical coating is difficult to apply uniformly, resulting in optical distortion.
It also scratches and cannot be repaired with plastic polish.

Acrylic is only about 3% as impact resistant as polycarbonate. Normal acrylic shatters upon impact, and therefore is considered an unsafe material for windshields. Acrylic is very chemically resistant, and is more transparent than glass - glass absorbs about half again as much light as acrylic does. Acrylic forms easily at high temperatures, about 300°. However, machining acrylic at room temperature is difficult.
It's not very easy to cut acrylic with a saw or drill holes in acrylic without shattering or weakening the material.

Polycarbonate is a DOT approved material for making windshields; normal acrylic is not. Some states require DOT approved windshields, and therefore in these states a normal acrylic windshield is actually illegal, however these laws are rarely enforced.
Normal acrylic can be shattered by an impact from a rock moving at speeds as low as 15mph.

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