



HOW TO MEASURE ENVIRONMENT RISK

The ANSI A326.3 2021 standard changed the minimum DCOF (dynamic coefficient of friction) rating for hard surface materials used in environmental settings. This updated standard creates (5) categories which provide definition to help determine how to classify each of these (5) defined environmental spaces.

Classification	Reference Category	Criteria	
Interior, Dry	ID	> .42 dry DCOF* (per Section 10.1)	
Interior, Wet	IW	> .42 wet DCOF* (per Section 9.1)	
Interior, Wet Plus	IW+	> .50 wet DCOF* & Manufactured Declared	
Exterior Wet	EW	> .55 wet DCOF* & Manufactured Declared	
Oils/Greases	O/G	> .55 wet DCOF* & Manufactured Declared	

ANSI A326.3 2021

This new ANSI standard also provides informative notes to help the specifier and facility operator on how to how to define your facility. Ultimately, the determination falls on ownership and your tolerance for risk. Ask your AutoStoneUSA representative for our technical ratings & manufacturer declared product use categories.

Example



A climate controlled workshop with minimal vehicle door access to minimize exposure to the elements can be rated Interior, Wet (IW+).

4.1.3 Interior, Wet (IW+) Environment

4.1.3 Interior, Wet Plus: See Section 3.4. Product shall be manufacturer-declared for this category: based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and drainage. Products meeting Interior, Wet Plus criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE:

Possible Areas of Use: Subject to determination by specifier and the criteria in this standard, may include, but are not limited to, public showers, interior pool decks, locker rooms, covered exterior areas, steam rooms, "front of the house" applications in restaurants with an open kitchen, and in "front of the house" applications in quick service, fast-casual, and self-service restaurants, food areas in gas stations, and other similar areas where floors may be walked upon when wet if clean, maintained, and free of standing water or other contaminants.

INFORMATIVE NOTE: In the absence of superseding manufacturer-declared product use classification, excepting where measured DCOF is lower due to the impact of structure on the DCOF measurement,

it is generally accepted that hard surface flooring in this category should have at least a wet DCOF value of 0.50*, with factors other than wet DCOF also taken in to consideration. Such factors include. but are not limited to, expected contaminants, drainage, surface structure, effect of

structure on the DCOF measurement, number of grout joints (see Informative Note in Section 9.1.7), traction-enhancing features, and intended use, in addition to the other criteria in this standard. As the suitability of the installed hard surface flooring depends significantly on such factors, a single normative DCOF limit value is not provided.

Example



A service drive with high speed doors and facility designed to control exterior weather and climate conditions can be IW+ rated.



4.1.4 Exterior, Wet (EW) Environment

Exterior, Wet: See Section 3.4. <u>Product shall be manufacturer-declared for this category</u> based

on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and additionally in wet applications, drainage. Products meeting Exterior, Wet criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE:

Possible Areas of Use: Subject to determination by specifier and the criteria in this standard, may include, but are not limited to, level outdoor living spaces including pool decks, walkways, patios, and sidewalks, where such floors may be walked upon when wet (excluding ice or snow) if level, clean, maintained, and free of standing water or other contaminants.

NFORMATIVE NOTE: In the absence of superseding manufacturer-declared product use classification, excepting where measured DCOF is lower due to the impact of structure on the DCOF measurement, it is generally accepted that hard surface flooring in this category should have at least a minimum wet DCOF value of 0.55*, with factors other than wet DCOF also taken into consideration. Such factors include, but are not limited to, expected contaminants, drainage, surface structure, effect of structure on the DCOF measurement, number of grout joints (see Informative Note in Section 9.1.7), traction-enhancing features, and intended use, in addition to the other criteria in this standard. As the suitability of the installed hard surface flooring depends significantly on such factors, a single normative DCOF limit value is not provided.

Example



Service drive with manual roll-up doors are EW rated. Roll-up doors do not control the environment throughout daily use and would default to exterior wet (EW), or oils/grease (O/G).

4.1.5 Oils, Grease (O/G) Environment

4.1.5 Oils/Greases: See Section 3.4. Product shall be manufacturer-declared for this category

where oil, grease, and/or fats may be present, based on manufacturing parameters, internal quality control criteria, and manufacturer experience with similar surfaces. Attributes to consider include, but are not limited to, product size, texture, structure, and drainage. Products meeting Oils/Greases criteria may require frequent maintenance to keep clean.

INFORMATIVE NOTE:

Possible Areas of Use: Subject to determination by specifier and the criteria in this standard, may include, but are not limited to, <u>level areas regularly exposed to automotive fluids</u>, "back of the

house" fast food or family style restaurants, food preparation areas with grills or deep-fry equipment, and any area where oil, grease, and/or fats may be present so long as such floors are level, regularly cleaned, maintained, and free of standing water and contaminant build-up.

INFORMATIVE NOTE: In the absence of superseding manufacturer-declared product use classification, excepting where measured DCOF is lower due to the impact of structure on the DCOF measurement, it is generally accepted that hard surface flooring in this category should have **at least a minimum wet DCOF value of 0.55***, with factors other than wet DCOF also taken into consideration. Such factors include, but are not limited to, expected contaminants, drainage, surface structure, effect of structure on the DCOF measurement, number of grout joints (see Informative Note in Section 9.1.7), traction-enhancing features, and intended use, in addition to the other criteria in this standard. As the suitability of the installed hard surface flooring depends significantly on such factors, a single normative DCOF limit value is not provided.

Example



An Oil Lube or service drive where either are regularly exposed to automotive fluids, and are exposed to weather conditions would be rated either (EW), or oils/grease (O/G).



MANUFACTURER-DECLARED USE

3.4 Manufacturer-Declared Product Use Classification: Manufacturer shall declare product use classification based on manufacturing parameters, internal quality control criteria, their experience with similar surfaces, and the criteria in this standard for all surfaces classified under Sections 4.1.3, 4.1.4, and 4.1.5, mosaic surfaces, and flooring where surface structure (e.g. three-dimensionally patterned or profiled surfaces) results in misleading DCOF measurements due to test device constraints. Optionally, surfaces classified under Section 4.1.2 shall also be permitted to be manufacturer-declared. Hard surface flooring manufacturer shall define internal product selection criteria (for example, but not in limitation, DCOF limit values established using this test method or other test methods, internal reference standards and practices, and/or the presence of abrasive grain and/or surface structure) for each product where the manufacturer-declared product use classification is not based on DCOF criteria developed per this standard. Regardless of declared product use classification, specifier shall determine materials appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, 3 and manufacturers' guidelines and recommendations.

INFORMATIVE NOTE: Normative measured DCOF limit values are not provided in this standard for exterior applications, interior ramps and inclines, pool decks, shower floors, or flooring that is contaminated with material other than water or where minimal or no footwear is used.

Informative Note Comment (above)

Tile DCOF rating alone does not provide user or specifier assurance that product is appropriate for environmental use. Seek Manufacturers' Declared Use Classification for confirmation.



SPECIFYING THE "RIGHT" PRODUCT

As referenced, the specifier shall determine materials that are appropriate for your automotive project condition(s). However, unless the tile manufacturer states their product is appropriate for a specific environmental use, the specifier might look for products that are stated to be designed, and manufactured for such the use environment; and which the manufacturer declares are appropriate for the environment and application of use.

AutoStoneUSA materials and each tile product series includes our "Manufacturers-Declared Use" statement. We are automotive designed, manufactured and specific. We are automotive flooring experts.

If you have questions about the right AutoStoneUSA product, ask your AutoStone flooring expert for technical support and help!

AutoStone Declared Use

AutoStoneUSA workshop service products include ANSI A326.3 environmental use rating. Our products are rated for automotive use.



AUTOMOTIVE SERVICE & WORK SHOP ENVIRONMENT EXAMPLES

STF Risk ultimately falls on ownership, but all parties play a role in the proper selection of materials used in automotive retail design & construction. The new ANSI A326.3 2021 standard provides greater definition of spaces by the creation of (5) categories which include environmental use definitions.



Service Drive without (4) full-height walls & doors.

Any structure without (4) full-height walls & doors which control exposure to elements would default to exterior wet (EW), or oils/grease (O/G).



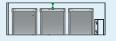
WorkShop with Limited Vehicle Access Doors

Large footprint tech workshops with limited vehicle doors that minimize exterior elements from impacting workshop conditions can be rated as interior, wet, plus (IW+).



Service Drive with Manual Roll-Up doors.

Manual roll-up doors do not control the environment throughout daily use and would default to exterior wet (EW), or oils/grease (O/G).



WorkShop with California Bay Design

Large footprint tech workshops with multiple vehicle doors that do not minimize exterior elements from impacting workshop conditions should be considered as exterior, wet (EW) or oils, grease (O/G) environments.



Service Drive with High-Speed Roll-Up doors.

High-speed doors can control the environment throughout daily use. High speed doors provide ownership an environment that may rate for interior, wet, plus (IW+), exterior wet (EW), or oils/grease (O/G).



Oil and Lube Express.

An Oil Lube where environment is regularly exposed to automotive fluids, and is exposed to weather conditions due to door access design would be rated both/either (EW), or oils/grease (O/G).



AUTOSTONEUSA MANUFACTURER-DECLARED USE CLASSIFICATION

ASUSA Series	ANSI A326.3 DCOF Requirement	ASUSA DCOF Performance	AutoStoneUSA ANSI A326.3 Declared-Use
enviroshop enviroshop smarter, better workshops	> .50 wet DCOF	> .55 wet DCOF	4.1.3 Interior, Wet Plus (IW+) and > .50 wet DCOF
driveseries driveseries! advanced surface technology	> .50 wet DCOF > .55 wet DCOF > .55 wet DCOF	> .55 wet DCOF	4.1.3 Interior, Wet Plus (IW+) > .50 wet DCOF 4.1.4 Exterior, Wet (EW) > .55 wet DCOF 4.1.5 Oils, Grease, (O/G) > .55 wet DCOF
clinkershop clinkershop better workshop solutions	> .50 wet DCOF > .55 wet DCOF > .55 wet DCOF	> .55 wet DCOF	4.1.3 Interior, Wet Plus (IW+) > .50 wet DCOF 4.1.4 Exterior, Wet (EW) > .55 wet DCOF 4.1.5 Oils, Grease, (O/G) > .55 wet DCOF
autopaver autopavers safer, smarter, exterior surfaces	> .50 wet DCOF > .55 wet DCOF > .55 wet DCOF	> .55 wet DCOF	4.1.3 Interior, Wet Plus (IW+) > .50 wet DCOF 4.1.4 Exterior, Wet (EW) > .55 wet DCOF 4.1.5 Oils, Grease, (O/G) > .55 wet DCOF
USClinker USCLINKER american made clinker	> .50 wet DCOF > .55 wet DCOF > .55 wet DCOF	> .55 wet DCOF	4.1.3 Interior, Wet Plus (IW+) > .50 wet DCOF 4.1.4 Exterior, Wet (EW) > .55 wet DCOF 4.1.5 Oils, Grease, (O/G) > .55 wet DCOF



AUTOSTONEUSA WORKSHOP & SERVICE DRIVE SYSTEMS



























WorkShop Textured Structured Surface









a Culture of Clean

Cleaning practices have a significant impact on your floors STF performance and impact on risk mitigation. AutoStoneUSA has specific recommended cleaning practices to help facilities clean and maintain their floors



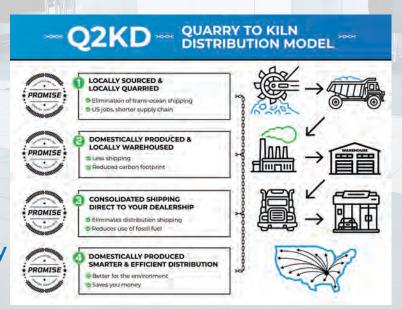
in a manner to help reduce STF risk in the automotive service and retail environment.



Better Manage Supply Chain Risk With MADE IN THE USA

MADE IN THE USA Reduces:

- * Material Cost
- * Carbon Footprint
- * Fossil Fuel Use
- * Port Congestion
- * Lead Time & Delivery
- * Project Risk



AUTOSTONEUSA

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