



31-078 Integral Skin Flexible Foam System

Technical Data Sheet

NCFI 31-078 is a two-component, HFO-blown, polyether, all PMDI based, integral skin urethane foam system. This system utilizes 1233zd as the primary blowing agent which has zero ODP and low GWP (less than 5).

Typical Properties of Components

Description	Poly*	Iso
Component	B-31-078	A-31-078
Appearance	Opaque, colorless liquid	Amber
Brookfield Viscosity @ 20 rpm	775 cps at 72°F	500 cps at 72°F
Specific Gravity	1.02	1.20
Storage Temperature	32°F – 100°F	60°F – 100°F
Shelf Life (from DOM)	6 months	6 months

*Poly must be agitated prior to use.

Mix Ratio

By weight: 100 parts poly : 44 parts iso Index: 93

Typical Properties of Mixed System at 72°F

	Slow	Regular	Fast
Cream Time (sec)	70	45	30
Gel Time (sec)	150	110	100
Rise Time (sec)	190	140	110
Free Rise Core Density (pcf)	7.5	7.5	7.5

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Typical Physical Properties

Skin Hardness:*	
Shore A	43
Shore CF	57
Tensile Strength*	186 psi
Tear Strength, Die C*	49 pli
Elongation*	192%
Flammability:*	
CAL 117 - 2000	Pass
CAL 117 - 2013	Pass
NFPA 260 – Class I	Pass
NFPA 261	Pass
FAR 25.853(a)ii	Pass
UL-94 HBF	Pass
UL-94 V2	Pass
FMVSS 302	Pass
BS EN 1021-1:2006	Pass
BS EN 1021-2:2006	Pass
GB/T 2408-2008	HB

*Testing performed on 27 pcf molded part, 100:44 ratio

Storage and Handling

Mix poly component to a homogenous state prior to use. Avoid entraining air during mixing. For both components, avoid moisture contamination during storage, handling and processing. Pad containers and day tanks with either nitrogen or dry air (desiccant cartridge or -40°F dew point dry air). Follow recommended storage temperature requirements as indicated above. **Failure to follow temperature requirements can result in irreparable damage to the iso component.**

Processing Notes

Demold time is dependent on shot size, and material and mold temperatures. NCFI recommends using a high-quality, properly applied wax or silicone release agent to prevent cured material from sticking to mold surfaces. Parts may shrink after demolding, and should be crushed or puffed to prevent this from happening. To improve color stability and durability, NCFI recommends the use of an aliphatic urethane in-mold coating or topcoat paint.

Revised 7/9/2020