

**HOLDFAST® 696 SURFACE ACTIVATOR
MATERIAL SAFETY DATA SHEET****1. Identification of the Substance/Preparation****1.1 Identification of the substance or preparation:****Product Name:** HOLDFAST® 696 Surface Activator**1.2 Product Code:**

19391 (100ml), 19389 (500ml), 19390 (1L), 19392 (5L)

1.3 Product description:

Holdfast® 696 Surface Activator is at the same time a cleaner, degreaser and Primer. Holdfast® Surface Activator will activate non porous surfaces such as plastics, coatings and metal for improved adhesion of sealants based on silicone, polyurethane and MS Polymer®.

**2. Composition/Information on Ingredients**

	CAS - Nr	Conc. In %	Symbol	R-phrases
2-propanol	000067-63-0	> 25	F;Xi	11-36-67
Tetraisopropyl titanate	000546-68-9	< 20	Xi	10-36/37/38

3. Hazards Identification**NFPA code:** 1-3-0

- Highly flammable
- Irritant to the eyes
- Vapours may cause drowsiness and dizziness

4. First Aid Measures**4.1 Swallowed:**

Never give water to an unconscious person. Do not induce vomiting. Seek medical advice.

4.2 Eye contact:

Rinse immediately with plenty of water Seek medical advice.

4.3 Skin Absorption:

Rinse immediately with plenty of water. If irritation persists seek medical advice.

4.4 Inhalation:

Remove the victim into fresh air Seek medical advice.

5. Fire-Fighting Measures

5.1 Fire extinguishing media:

- Water spray
- Polyvalent foam
- Alcohol foam
- BC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:

- Solid water jet ineffective as extinguishing medium.

5.3 Special exposure hazards:

On burning: release of carbon monoxide – carbon dioxide. Gas/vapour spreads at floor level: ignition hazard.

5.4 Special protective equipment for fire-fighters:

Heat/fire exposure: compressed air/oxygen apparatus.

5.5 Instructions:

Cool drums with water spray. Do not move the load if exposed to heat

6. Accidental Release Measures

6.1 Environmental precautions:

Use appropriate containment to avoid environmental contamination.

6.2 Methods for cleaning up:

- Take up liquid spill into absorbent material e.g. dry sand/earth.
- Take collected spill to competent authority.
- Wash clothing and equipment after handling.

7. Handling and Storage

7.1 Handling:

- Observe strict hygiene. In case of insufficient ventilation: keep naked flames/sparks away. Do not discharge the waste into the drain.

7.2 Storage:

Keep container tightly closed.

Store in a cool area.

Store in a dry area.

Keep away from: heat sources, ignitions sources, oxidizing agents, acids, bases, halogens.

Materials for packaging: tin

7.3 Specific Uses:

- See information supplied by the manufacturer

8. Exposure Controls/Personal Protection

8.1 Exposure limit values:

TLV-TWA	: not listed	mg/m3	: 400	ppm
TLV-STEL	: not listed	mg/m3	: 500	ppm
TLV-Ceiling	: not listed	mg/m3	: not listed	ppm

OES-LTEL	: not listed	mg/m3	: not listed	ppm
OES-STEL	: not listed	mg/m3	: not listed	ppm
MEL-LTEL	: 999	mg/m3	: 400	ppm
MEL-STEL	: 1250	mg/m3	: 500	ppm
MAK	: 500	mg/m3	: 200	ppm
TRK	: not listed	mg/m3	: not listed	ppm
MAC-TGG 8 h	: 650	mg/m3	: not listed	ppm
MAC-TGG 15 min.	: not listed	mg/m3	: not listed	ppm
MAC-Ceiling	: not listed	mg/m3	: not listed	ppm
VME-8 h	: not listed	mg/m3	: not listed	ppm
VLE-15 min.	: 980	mg/m3	: 400	ppm
GWBB-8 h	: 997	mg/m3	: 400	ppm
GWK-15 min.	: 1248	mg/m3	: 500	ppm
Momentary value	: not listed	mg/m3	: not listed	ppm
EC	: not listed	mg/m3	: not listed	ppm
EC-STEL	: not listed	mg/m3	: not listed	ppm

8.2 Exposure controls:

8.3 Personal protection:

8.3.1 Respiratory protection:

- In case of insufficient ventilation: respiratory protection with a filter type A.

8.3.2 Hand protection:

- Chemically resistant gloves

8.3.3 Eye protection:

- Safety glasses

8.3.4 Skin protection:

- Suitable Protective clothing

9. Physical and Chemical Properties

<i>Appearance:</i>	Liquid
<i>Odour:</i>	Alcohol
<i>Colour:</i>	Colourless
<i>Boiling Point:</i>	> 82°C
<i>Flashpoint:</i>	12°C
<i>Explosion Limits:</i>	2 – 12 vol%
<i>Vapour Pressure (at 20°C):</i>	43 hPa
<i>Relative density (at 20°C):</i>	0.8
<i>Water solubility:</i>	Insoluble
<i>Soluble in:</i>	Diethyl ether, chloroform
<i>Relative vapour density:</i>	2.1

10. Stability and Reactivity

10.1 Conditions to avoid/reactivity

- Stable under normal conditions

10.2 Materials to avoid:

- Heat sources, ignition sources, oxidizing agents, acids, bases, halogens.

10.3 Hazardous decomposition products:

On burning: release of carbon monoxide – carbon dioxide. Violent to explosive reaction with (strong) oxidizing agents. Reacts exothermically with (some) metals. Prolonged storage/in large quantities: may form peroxides.

11. Toxicological Information

11.1 Acute toxicity:

2-Propanol:

LD50 oral rat : 4710 mg/kg
LD50 dermal rabbit : 12870 mg/kg
LC50 inhalation rat : >20 mg/1/4 h

Tetraisopropyl Titanate:

LD50 oral rat : 7460 mg/kg

11.2 Chronic toxicity:

Teratogenicity (MAK): C (2-propanol)
Carcinogenicity (TLV): (A4),(2-propanol)
IARC-classification: 3 (2-propanol)

Obligatory medical control (ARAB-RGPT Art. 124) (Belgium)
Group: I Number: 23.1

11.3 Routes of exposure: Ingestion, inhalation, eyes and skin

11.4 Acute effects/symptoms:

After inhalation: Slightly irritant to respiratory organs.
Vapours may cause drowsiness and dizziness.
Exposure to high concentrations: Irritation of the respiratory tract.
Dry/sore throat.
CNS depression.
Dizziness, headache, narcosis.
After ingestion: Harmful: possible lung damage if swallowed.
After absorption of high quantities: CNS depression.
Disturbed motor response.
Headache.
Disturbances of consciousness.
Dilation of the blood vessels.
Low arterial pressure.
Vomiting, nausea, abdominal pain.
Risk of aspiration pneumonia.
Symptoms may appear later: Body temperature fall.
Slowing respiration.
After skin contact: Practically non-toxic in contact with skin.
Not irritant to skin.

After eye contact:

Irritation to the eye tissue.

11.5 Chronic effects:

Contains substance with uncertain teratogenic properties (2-propanol).

Red skin.

Dry skin.

Itching.

Skin rash/inflammation.

Impaired memory.

Cracking of the skin.

12. Ecological Information

12.1 Ecotoxicity:

- No data available

12.2 Mobility:

Volatile organic compounds (VOC): 100% / 800 gm/l

For other physicochemical properties see section 9

12.3 Aquatic toxicity:

2-Propanol:

LC50 (96h): 9640 mg/l (pimephales Promelas)

EC50 (48h): 13299 mg/l (Daphnia Magna)

EC50 (72h): 1800 mg/l (Algae)

12.4 Other adverse effects:

- WGK

: 1 (Classification based on the components as per per Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)

13. Disposal Considerations

13.1 Disposal methods:

- Landfill or incinerate at an approved site in accordance with national and local regulations.

14. Transport Information

Proper shipping name: UN 1993, Flammable liquid, n.o.s. (contains isopropyl alcohol).

Transport by road/rail (ADR/RID): class 3, 3b)

Danger code: 33

Danger labels on tanks: 3

On packages: 3

Substance identification number (UN number): 1993

Packaging: II

Maritime transport (IMDG code): class 3.2 p 3230
EMS: 3-07
MFAG: 4.2

Inland navigation (ADNR): class 3, 3b)

Air freight (ICAO): Instruction "passenger": 305/Y305
Instruction "cargo": 307

Other information:

When substances and their packaging meet the conditions established by ADR/RID marginal 2301a, only the following prescriptions shall be complied with: each package shall display a diamond-shaped figure with the following inscription: UN 1993, or, in the case of different goods with different identification numbers within a single package: the letters 'LQ'.

15. Regulatory Information

Labelling in accordance with EC directives 67/548/EEC and 1999/45/EC

Highly flammable

Irritant

R36: Irritant to the eyes.
R67: Vapours may cause drowsiness and dizziness
S(02): (Keep out of reach of children)
S07: Keep container tightly closed
S16: Keep away from sources of ignition – No Smoking
S24/25: Avoid contact with skin and eyes
S26: In case of contact with eyes, rinse immediately with plenty of water and seek Medical advice
S(46): If swallowed, seek medical advice immediately and show this container or label.

16. Other Information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Exposure limits:

TLV : Threshold Limit Value – ACGIH US 2000
OES : Occupational Exposure Standards – United Kingdom 1999
MEL : Maximum Exposure Limits – United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen – Germany 2001
TRK : Technische Richtkonzentrationen – Germany 2001
MAC : Maximale aanvaarde concentratie – the Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition – France 1999
VLE : Valeurs limites d'Exposition à court terme – France 1999
GWBB : Grenswaarde beroepsmatige blootstelling – Belgium 1998
GWK : Grenswaarde kortstondige blootstelling – Belgium 1998

EC : Indicative occupational exposure limit values – directive 2000/39/EC

I : Inhalable fraction = T : Total dust = E : Einatembarer Aerosolanteil

R : Respirable fraction = A: Alveolengängiger Aerosolanteil/Alveolar dust

C : Ceiling limit

a:	aerosol	r:	rook/Rauch	(fume)	
d:	damp	(vapour)	st:	Stof/Staub	(dust)
du:	dust	ve:	vezel	(fibre)	
fa:	Faser	(fibre)	va:	vapour	
fi:	fibre	om:	oil mist		
fu:	fume	on:	Olienevel/Ölnebel	(oil mist)	
p:	poussière	(dust)	part:	particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes – the Netherlands 2002

Health and Safety Recommendation

– Apply the usual industrial hygiene

Last Updated: 26th September 2008