SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name
752 - Hardener for E-Filler
Product no.
752
REACH registration number
Not applicable

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture
Hardener

Uses advised against
-
The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address
HBC System Smarttool Production ApS
Hobrovej 961-963
9530 Stövring
Denmark
tel:+45 70 22 70 70
Contact person
Vibeke Jørgensen
E-mail
info@hbc-system.com
SDS date
2016-06-09
SDS Version
1.1

1.4. Emergency telephone number

Use your national or local emergency number
See section 4 “First aid measures”

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Corr. 1B; H314
Acute Tox. 4; H302
Aquatic Chronic 3; H412

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)

Signal word
Danger

Hazard statement(s)

Causes severe skin burns and eye damage. (H314)
Harmful if swallowed. (H302)
Harmful to aquatic life with long lasting effects. (H412)

Safety statement(s)

General	-
Prevention	Do not breathe mist/vapours/fume/spray. (P260). Wear eye protection/protective clothing/protective gloves. (P280).
Response	IF ON SKIN (or hair): Take °Ff immediately all contaminated clothing. Rinse skin with water/shower. (P303+P361+P353). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338).
Storage	-
Disposal	-

Identity of the substances primarily responsible for the major health hazards

2-Butanone,peroxide, hydrogen peroxide solution ... %

2.3. Other hazards

This product contains an organic solvent. Repeated exposure to organic solvents can result in damage to the nervous system and inner organs, such as the liver and kidneys.

Additional labelling

-

Additional warnings

-

VOC

VOC-MAX: 160 g/l, MAXIMUM VOC CONTENT (B/b): 250 g/l.

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME:	2,2,4-trimethylpentane-1,3-diyl,bis,2-methylpropanoate
IDENTIFICATION NOS.:	CAS-no: 6846-50-0 EC-no: 229-934-9
CONTENT:	40-60%
CLP CLASSIFICATION:	Aquatic Chronic 3 H412

NAME:	2-Butanone,peroxide
IDENTIFICATION NOS.:	CAS-no: 1338-23-4 EC-no: 215-661-2
CONTENT:	25-40%
CLP CLASSIFICATION:	Org. Perox. C/D, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1 H242, H302, H314, H318

NAME:	4-hydroxy-4-methylpentan-2-one diacetone alcohol
IDENTIFICATION NOS.:	CAS-no: 123-42-2 EC-no: 204-626-7 REACH-no: 01-2119473975-21 Index-no: 603-016-00-1
CONTENT:	15-25%
CLP CLASSIFICATION:	Flam. Liq. 3, STOT SE 3, Eye Irrit. 2 H226, H319, H335
NOTE:	S

NAME:	hydrogen peroxide solution ... %
IDENTIFICATION NOS.:	CAS-no: 7722-84-1 EC-no: 231-765-0 Index-no: 008-003-00-9
CONTENT:	1-3%
CLP CLASSIFICATION:	Ox. Liq. 1/2, Acute Tox. 4, STOT SE 3, Skin. Corr. 1A, Skin. Corr. 1B, Aquatic Chronic 3 H271, H302, H314, H332, H335, H412

NAME:	butanone ethyl methyl ketone
IDENTIFICATION NOS.:	CAS-no: 78-93-3 EC-no: 201-159-0 REACH-no: 01-2119457290-43 Index-no: 606-002-00-3
CONTENT:	1-3%
CLP CLASSIFICATION:	Flam. Liq. 2, STOT SE 3, Eye Irrit. 2 H225, H319, H336, EUH066
NOTE:	S

(*) See full text of H-phrases in chapter 16. Occupational exposure limits are listed in section 8, if these are available.
S = Organic solvent

Other informations

ATEmix(inhale, vapour) > 20
ATEmix(oral) = 1111,112 - 1666,668
Eye Cat. 1 Sum = Sum(Ci/S(G)CLi) = 9,3496 - 14,0244
Skin Cat. 2 Sum = Sum(Ci/S(G)CLi) = 28,0232 - 42,0348
N chronic (CAT 3) Sum = Sum(Ci/M(chronic)i*25*0.1*10^CATi) = 1,44 - 2,16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor, if in doubt about the injured person's condition or if the symptoms continue. Never give an unconscious person water or similar.

Inhalation

Get the person into fresh air and stay with them.

Skin contact

Remove contaminated clothing and shoes at once. Skin that has come in contact with the material must be washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

Remove contact lenses. Flush eyes with plenty of water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. Contact a doctor at once.

Ingestion

In the case of ingestion, contact a doctor immediately and take this safety data sheet or the label from the material with you. If the person is conscious, give them water. DO NOT try to induce vomiting, unless this is recommended by a doctor. Hold head facing down so that no vomit runs back into the mouth and throat. Prevent shock by keeping the injured person warm and calm. Give mouth-to-mouth resuscitation if breathing stops. If unconscious, roll the injured person onto side with the top leg bent at both knee and hip. Call an ambulance.

Burns

Not applicable

4.2. Most important symptoms and effects, both acute and delayed

Tissue damaging effects: This product contains substances which are corrosive. If vapour or aerosols are in haled, it can result in damage to lungs, irritation and burns in the respiratory organs as well as coughing. Corrosive substances cause irreversible damage to eyes and acid burns to skin.
Neurotoxic effect: This product contains organic solvents, which can have an effect on the nervous system. Symptoms of neurotoxicity can be: loss of appetite, headache, dizziness, whistling in the ears, tingling sensations in the skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer. The skin will then be more prone to absorb dangerous substances, e.g. allergens.
Irritation effects: This product contains substances which cause irritation to skin and eyes, or when inhaled. Contact with locally irritative substances can cause the area of contact to be more prone to absorb damaging substances such as allergens.

4.3. Indication of any immediate medical attention and special treatment needed

No special

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Water jets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, as in the case of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Fire will result in thick black smoke. Exposure to catabolic products can damage your health. Fire fighters should use proper protection gear. Closed containers, which are exposed to fire, should be cooled with water. Do not let fire-extinguishing water run into sewers and other water courses.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances. Avoid inhalation of vapours from waste material.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of a leakage to the surroundings, contact the local environmental authorities. Consider putting up waste collecting trays/basins to prevent leakage to the surroundings.

6.3. Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. Cleaning should be done as far as possible using normal cleaning agents. Solvents should be avoided.

6.4. Reference to other sections

See section on “Disposal considerations ” with regard to the handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Consider putting up waste collecting trays/basins to prevent leakage to the surroundings. See section on 'Exposure controls/personal protection' for information on personal protection. Avoid direct contact with the product.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original.

Storage temperature

No data available.

7.3. Specific end use(s)

This product should only be used for applications described in Section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL

butanone ethyl methyl ketone (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): 200 ppm | 600 mg/m3
Short-term exposure limit (15-minute reference period): 300 ppm | 899 mg/m3
Comments: Sk (Sk = Can be absorbed through skin.)

hydrogen peroxide solution ... % (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): 1 ppm | 1,4 mg/m3
Short-term exposure limit (15-minute reference period): 2 ppm | 2,8 mg/m3

4-hydroxy-4-methylpentan-2-one diacetone alcohol (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): 50 ppm | 241 mg/m3
Short-term exposure limit (15-minute reference period): 75 ppm | 362 mg/m3

2-Butanone,peroxide (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): - ppm | - mg/m3
Short-term exposure limit (15-minute reference period): 0,2 ppm | 1,5 mg/m3

DNEL / PNEC

DNEL (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 9,4 mg/kg
Exposure: Dermal
Duration of Exposure: Long term – Systemic effects - Workers

DNEL (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 3,4 mg/kg
Exposure: Dermal
Duration of Exposure: Long term – Systemic effects - General population

DNEL (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 66,4 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - Workers

DNEL (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 11,8 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - General population

DNEL (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 3,4 mg/kg
Exposure: Oral
Duration of Exposure: Long term – Systemic effects - General population
DNEL (butanone ethyl methyl ketone): 1161 mg/kg
Exposure: Dermal
Duration of Exposure: Long term – Systemic effects - Workers

DNEL (butanone ethyl methyl ketone): 412 mg/kg
Exposure: Dermal
Duration of Exposure: Long term – Systemic effects - General population

DNEL (butanone ethyl methyl ketone): 600 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - Workers

DNEL (butanone ethyl methyl ketone): 106 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - General population

DNEL (butanone ethyl methyl ketone): 31 mg/kg
Exposure: Oral
Duration of Exposure: Long term – Systemic effects - General population

PNEC (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 9,06 mg/kg
Exposure: Freshwater sediment

PNEC (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 0,91 mg/kg
Exposure: Marine water sediment

PNEC (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 0,63 mg/kg
Exposure: Soil

PNEC (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 2 mg/L
Exposure: Freshwater

PNEC (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 0,2 mg/L
Exposure: Marine water

PNEC (4-hydroxy-4-methylpentan-2-one diacetone alcohol): 1 mg/L
Exposure: Intermittent release

PNEC (butanone ethyl methyl ketone): 284,7 mg/kg
Exposure: Freshwater sediment

PNEC (butanone ethyl methyl ketone): 22,5 mg/kg
Exposure: Soil

PNEC (butanone ethyl methyl ketone): 55,8 mg/L
Exposure: Freshwater

PNEC (butanone ethyl methyl ketone): 55,8 mg/L
Exposure: Intermittent release

8.2. Exposure controls

Compliance with the stated exposure limits values should be checked on a regular basis.

General recommendations

Observe general occupational hygiene.

Exposure scenarios

If there is an appendix to this safety data sheet, the indicated exposure scenarios must be complied.

Exposure limits

Trade users are covered by the rules of the working environment legislation on maximum concentrations for exposure. See work hygiene threshold values below.

Appropriate technical measures

Airborne gas and dust concentrations must be kept as low as possible and below the current threshold

values (see below). Use for example an exhaust system if the normal air flow in the work room is not sufficient. Make sure that eyewash and emergency showers are clearly marked.

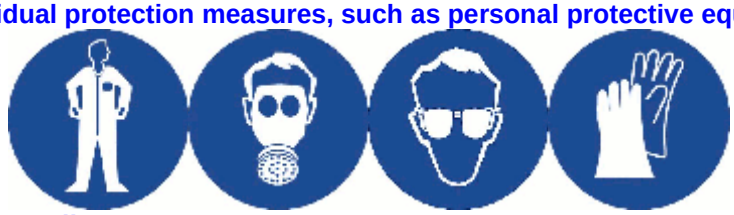
Hygiene measures

Whenever you take a break in using this product and when you have finished using it, all exposed areas of the body must be washed. Always wash hands, forearms and face.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible collect spillage during work.

Individual protection measures, such as personal protective equipment



Generally

Use only CE marked protective equipment.

Respiratory Equipment

If the ventilation at the work place is not sufficient, use a half or whole mask with an appropriate filter or an air-supplied respiratory protector. The choice depends on the concrete work situation and how long you will be using the product.

Skin protection

Special work clothing should be used. When working with this product for a long period of time, use a protective suit.

Hand protection

Use protective gloves. The concrete work situation is not known. Contact the suppliers of the gloves for help on the glove type. Please note that elastic gloves stretch when used. The thickness of the gloves, and therefore their penetration time, will be reduced. Moreover, the temperature of the glove in use is about 35°C, while the standard test, EN 374-3, is done at 23°C. The penetration time is therefore reduced by a factor of 3.

Eye protection

Use safety glasses with a side shield.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Colour	Odour	pH	Viscosity	Density (g/cm3)
Liquid	Colourless	Characteristic	-	-	-

Phase changes

Melting point (°C)	Boiling point (°C)	Vapour pressure (mm Hg)
-		-

Data on fire and explosion hazards

Flashpoint (°C)	Ignition (°C)	Self ignition (°C)
-	-	-

Explosion limits (Vol %)	Oxidizing properties
-	-

Solubility

Solubility in water	n-octanol/water coefficient
Soluble	-

9.2. Other information

Solubility in fat	Additional information
-	N/A

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section on “Handling and storage”.

10.3. Possibility of hazardous reactions

No special

10.4. Conditions to avoid

Do not expose to heat (e.g. sunlight), because it can lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reductants agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Substance	Species	Test	Route of exposure	Result
butanone ethyl methyl ketone...	Guinea pig	LD50	Inhalation	40 mg/L
butanone ethyl methyl ketone...	Rabbit	LD50		13 g/kg
butanone ethyl methyl ketone...	Rat	LD50	Oral	2737 mg/kg
butanone ethyl methyl ketone...	Guinea pig	LC50	Inhalation	32000 mg/m3
hydrogen peroxide solution	Rat	LD50		3000 mg/kg
hydrogen peroxide solution	Rabbit	LD50	Oral	820 mg/kg
hydrogen peroxide solution	Guinea pig	LD50	Intraperitoneal	880 mg/kg
4-hydroxy-4-methylpentan-2-on...	Rat	LD50	Oral	2520 mg/kg
4-hydroxy-4-methylpentan-2-on...	Rabbit	LD50		13500 mg/kg
4-hydroxy-4-methylpentan-2-on...	Rat	LD50	Oral	2,08 g/kg
2-Butanone,peroxide	Rat	LD50	Intraperitoneal	65 mg/kg
2-Butanone,peroxide	Guinea pig	LD50	Oral	470 mg/kg
2-Butanone,peroxide	Guinea pig	LC50	Inhalation	170 mg/kg

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Long term effects

Tissue damaging effects: This product contains substances which are corrosive. If vapour or aerosols are in haled, it can result in damage to lungs, irritation and burns in the respiratory organs as well as coughing. Corrosive substances cause irreversible damage to eyes and acid burns to skin.
Neurotoxic effect: This product contains organic solvents, which can have an effect on the nervous system. Symptoms of neurotoxicity can be: loss of appetite, headache, dizziness, whistling in the ears, tingling sensations in the skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer. The skin will then be more prone to absorb dangerous substances, e.g. allergens.
Irritation effects: This product contains substances which cause irritation to skin and eyes, or when inhaled. Contact with locally irritative substances can cause the area of contact to be more prone to absorb damaging substances such as allergens.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Species	Test	Test duration	Result

butanone ethyl methyl ketone...	Daphnia	LC50	48 H	5091 mg/L
butanone ethyl methyl ketone...	Fish	LC50	96 H	5600 mg/L
hydrogen peroxide solution	Daphnia	EC50	48 h	2320 µg/L
hydrogen peroxide solution	Fish	LC50	96 h	93000 µg/L
4-hydroxy-4-methylpentan-2-on...	Daphnia	LC50	24 h	9000 mg/L
4-hydroxy-4-methylpentan-2-on...	Fish	LC50	96 h	420 mg/L

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result

No data available.

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BFC
butanone ethyl methyl ketone...	No	0,29	No data available
4-hydroxy-4-methylpentan-2-on...	No	-0,34	No data available

12.4. Mobility in soil

butanone ethyl methyl ketone...: Log Koc= 0,308051, Calculated from LogPow (High mobility potential.). 4-hydroxy-4-methylpentan-2-on...: Log Koc= -0,190846, Calculated from LogPow (High mobility potential.).

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

This product contains substances which can cause undesirable long-term effects in the water environment, due to its poor biodegradability.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The product is covered by the regulations on dangerous waste.

Waste

EWC code

-

Specific labelling

-

Contaminated packing

Packaging which contains leftovers from the product must be disposed of in the same way as the product.

SECTION 14: Transport information

This product is covered by the conventions on dangerous goods.

14.1 – 14.4

ADR/RID

14.1. UN number	3105
14.2. UN proper shipping name	ORGANIC PEROXIDE TYPE D, LIQUID
14.3. Transport hazard class(es)	5.2
14.4. Packing group	-
Notes	-
Tunnel restriction code	D

IMDG

UN-no.	3105
Proper Shipping Name	ORGANIC PEROXIDE TYPE D, LIQUID
Class	50.2
PG*	-
EmS	-
MP**	No
Hazardous constituent	-

IATA/ICAO

UN-no.	3105
Proper Shipping Name	ORGANIC PEROXIDE TYPE D, LIQUID
Class	50.2
PG*	-

14.5. Environmental hazards

-

14.6. Special precautions for user

-

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Restrictions for application

People under the age of 18 must not be exposed to this product cf. Council Directive 94/33/EC.

Demands for specific education

-

Additional information

Sources

COUNCIL DIRECTIVE 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.
Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.
IDirective 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC.
EC Regulation 1272/2008 (CLP).
EC regulation 1907/2006 (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225 - Highly flammable liquid and vapour.
H226 - Flammable liquid and vapour.
H242 - Heating may cause a fire.
H271 - May cause fire or explosion; strong oxidiser.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H412 - Harmful to aquatic life with long lasting effects.
EUH066 - Repeated exposure may cause skin dryness or cracking.

The full text of identified uses as mentioned in section 1

-

Other symbols mentioned in section 2

-

Other

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version)) is marked with a blue triangle.

The safety data sheet is validated by

kbb

Date of last essential change
(First cipher in SDS version)

2016-04-25

Date of last minor change
(Last cipher in SDS version)

2016-06-09