

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

481 - Medium Thinner

Product no.

481

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

Industrial use

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 Støvring

Denmark

tel:+45 70 22 70 70

Contact person

Vibeke Jørgensen

E-mail

info@hbc-system.com

SDS date

2016-07-05

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

Flam. Liq. 2; H225

Eye Irrit. 2; H319

STOT SE 3; H336

STOT SE 3; H335

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

Highly flammable liquid and vapour. (H225)
 Causes serious eye irritation. (H319)
 May cause drowsiness or dizziness. (H336)
 May cause respiratory irritation. (H335)

General

-

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210).
 Wear eye protection. (P280).

Safety

statement(s)

Response

If eye irritation persists: Get medical advice/attention. (P337+P313).
 In case of fire: Use alcohol-resistant foam/carbolic acid/powder/water mist/carbon dioxide/dry sand to extinguish. (P370+P378).

Storage

Store in a well-ventilated place. Keep cool. (P403+P235).

Disposal

Dispose of contents/container to an approved waste disposal plant. (P501).

Identity of the substances primarily responsible for the major health hazards

4-methylpentan-2-one isobutyl methyl ketone , 2-ethoxy-1-methylethyl acetate 2PG1EEA

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: 600 g/l, MAXIMUM VOC CONTENT (B/e): 840 g/l.

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME: 4-methylpentan-2-one isobutyl methyl ketone
 IDENTIFICATION NOS.: CAS-no: 108-10-1 EC-no: 203-550-1 Index-no: 606-004-00-4
 CONTENT: 25-40%
 CLP CLASSIFICATION: Flam. Liq. 2, Acute Tox. 4, STOT SE 3, Eye Irrit. 2
 H225, H302, H319, H332, H335, EUH066
 NOTE: S

NAME: 2-ethoxy-1-methylethyl acetate 2PG1EEA
 IDENTIFICATION NOS.: CAS-no: 54839-24-6 EC-no: 259-370-9 Index-no: 603-177-00-8
 CONTENT: 25-40%
 CLP CLASSIFICATION: Flam. Liq. 3, STOT SE 3
 H226, H336

NAME: 2-methoxy-1-methylethyl acetate
 IDENTIFICATION NOS.: CAS-no: 108-65-6 EC-no: 203-603-9 REACH-no: 01-2119475791-29-xxxx Index-no: 607-195-00-7
 CONTENT: 10-15%
 CLP CLASSIFICATION: Flam. Liq. 3
 H226
 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(inhale, dust/mist) > 20000
 ATEmix(oral) > 2000
 Eye Cat. 2 Sum = Sum(Ci/S(G)CLi) = 2 - 0

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 water (20-30°C) for at least 15 minutes. Call a doctor.

Ingestion

Give the person plenty to drink and stay with the person. If the person feels unwell, contact a doctor immediately and take this safety data sheet or the label from the product with you. Do not induce vomiting unless recommended by the doctor. Hold head facing down so that no vomit runs back into the mouth and throat.

Burns

Rinse with water until the pain stops and continue for 30 minutes.

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

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

If eye irritation persists: Get medical advice/attention.

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 inhalation of vapours from waste material. Stores that have not ignited must be cooled by water mist. Where possible, remove flammable materials. Make sure there is sufficient ventilation.

6.2. Environmental precautions

No specific requirements.

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

See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original. Must be stored in a cool and ventilated area, away from possible sources of combustion.

Please be aware that this is a chemical that forms peroxides. The content of peroxide must be controlled regularly after opening for example every 6th month.

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

2-methoxy-1-methylethyl acetate (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): 50 ppm | 274 mg/m³

Short-term exposure limit (15-minute reference period): 100 ppm | 548 mg/m³

Comments: Sk (Sk = Can be absorbed through skin.)

4-methylpentan-2-one isobutyl methyl ketone (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): 50 ppm | 208 mg/m³

Short-term exposure limit (15-minute reference period): 100 ppm | 416 mg/m³

Comments: sk bmgv (Bmgv = Biological Monitoring Guidance Value. Sk = Can be absorbed through skin.)

DNEL / PNEC

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

No specific requirements.

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.

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/cm ³)
Liquid	Colourless	Characteristic	-	-	-

Phase changes

Melting point (°C)	Boiling point (°C)	Vapour pressure (mm Hg)
-	37,78	-

Data on fire and explosion hazards

Flashpoint (°C)	Ignition (°C)	Self ignition (°C)
22	-	-
Explosion limits (Vol %)	Oxidizing properties	
-	-	

Solubility

Solubility in water	n-octanol/water coefficient
Insoluble	-

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

Avoid static electricity. 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
2-methoxy-1-methylethyl acetat...	Rat	LD50	Oral	8532 mg/kg
2-methoxy-1-methylethyl acetat...	Rabbit	LD50		> 5000 mg/kg
2-methoxy-1-methylethyl acetat...	Guinea pig	LD50	Intraperitoneal	750 mg/kg
2-ethoxy-1-methylethyl acetat...	Rat	LD50	Oral	4,705 g/kg

According to EC-Regulation 1907/2006 (REACH)

2-ethoxy-1-methylethyl acetat...	Rat	LC50	Inhalation	6990 mg/m ³
4-methylpentan-2-one isobuty...	Guinea pig	LD50	Oral	1900 mg/kg
4-methylpentan-2-one isobuty...	Guinea pig	LD50	Intraperitoneal	268 mg/kg
4-methylpentan-2-one isobuty...	Guinea pig	LC50	Inhalation	23300 mg/m ³

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

Causes serious eye irritation.

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

May cause respiratory irritation. May cause drowsiness or dizziness.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Long term effects

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
2-methoxy-1-methylethyl acetat...	Fish	LC50	96 h	120 ug/L
4-methylpentan-2-one isobuty...	Daphnia	EC50	24 H	1550 mg/L
4-methylpentan-2-one isobuty...	Fish	LC50	96 H	540 mg/L

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
No data available.			

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BFC
2-methoxy-1-methylethyl acetat...	No	0,56	No data available
2-ethoxy-1-methylethyl acetat...	No	0,76	No data available
4-methylpentan-2-one isobuty...	No	1,31	No data available

12.4. Mobility in soil

2-methoxy-1-methylethyl acetat...: Log Koc= 0,521864, Calculated from LogPow (High mobility potential). 2-ethoxy-1-methylethyl acetat...: Log Koc= 0,680244, Calculated from LogPow (High mobility potential). 4-methylpentan-2-one isobuty...: Log Koc= 1,115789, Calculated from LogPow (High mobility potential).

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No special

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The product is covered by the regulations on dangerous waste.

Waste

EWC code
08 01 11

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	1263
14.2. UN proper shipping name	
14.3. Transport hazard class(es)	3
14.4. Packing group	II
Notes	-
Tunnel restriction code	D/E

IMDG

UN-no.	1263
Proper Shipping Name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Class	3
PG*	II
EmS	F-E, S-E
MP**	Yes
Hazardous constituent	-

IATA/ICAO

UN-no.	1263
Proper Shipping Name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Class	3
PG*	II

14.5. Environmental hazards

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

14.6. Special precautions for user

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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

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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.

Directive 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.

H302 - Harmful if swallowed.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

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

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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)

2015-12-18

Date of last minor change

(Last cipher in SDS version)

2016-04-13