

Material Safety Data Sheet

According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

1 Identification of substance

- **Product details**
- **Trade name** *MS 660*
- **Article number:** 5024945047
- **Application of the substance / the preparation** *Adhesives*
- **Manufacturer/Supplier:**
*H.B. Fuller Austria Produktions GesmbH
 Kaplanstraße 30
 A-4600 Wels
 Tel. +43 (0) 7242/211770-0*
- **Informing department:** *Quality Control*
- **Emergency information:** *0043 / 1 / 4064343 (Vergiftungsinformationszentrale)*

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** *Solvent mixture with additives.*

- **Dangerous components:**

CAS: 78-93-3 EINECS: 201-159-0	<i>butanone</i>	<i>Xi, F; R 11-36-66-67</i>	<i>50-100%</i>
CAS: 108-94-1 EINECS: 203-631-1	<i>cyclohexanone</i>	<i>Xn; R 10-20</i>	<i>10-25%</i>
CAS: 109-99-9 EINECS: 203-726-8	<i>tetrahydrofuran</i>	<i>Xi, F; R 11-19-36/37</i>	<i><12.5%</i>

- **Additional information** *For the wording of the listed risk phrases refer to section 16.*

3 Hazards identification

- **Hazard designation:**
*Xi Irritant
 F Highly flammable*
- **Information pertaining to particular dangers for man and environment**
*The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
 Has a narcotic effect.
 R 11 Highly flammable.
 R 36 Irritating to eyes.
 R 66 Repeated exposure may cause skin dryness or cracking.
 R 67 Vapours may cause drowsiness and dizziness.*
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

4 First aid measures

- **General information** *Take affected persons into the open air.*
- **After inhalation** *Supply fresh air.*
- **After skin contact** *The product is not skin irritating.*

(Contd. on page 2)

Material Safety Data Sheet

According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

Trade name MS 660

(Contd. of page 1)

- **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing** In case of persistent symptoms consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet.
Foam
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **Special hazards caused by the material, its products of combustion or flue gases:**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Use breathing protection against the effects of fumes/dust/aerosol.
Wear protective clothing.
- **Measures for environmental protection:**
Prevent material from reaching sewage system, holes and cellars.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Send for recovery or disposal in suitable containers.
Use non sparking handtools.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Ensure that suitable extractors are available on processing machines
Take note of emission threshold.
Use solvent-proof equipment.
Keep away from children
Keep eye wash bottles available on working place.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Highly volatile, flammable constituents are released during processing.
Fumes can combine with air to form an explosive mixture.

(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

Trade name MS 660

(Contd. of page 2)

Flammable mixtures may be formed in empty containers.

- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**
Please take care on national and local requirements.

- **Components with critical values that require monitoring at the workplace:**

78-93-3 butanone

OES	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm IOELV, Sk,
-----	---

108-94-1 cyclohexanone

OES	Short-term value: 20 ppm Long-term value: 10 ppm IOELV, Sk
-----	--

109-99-9 tetrahydrofuran

OES	Short-term value: 300 mg/m ³ , 100 ppm Long-term value: 150 mg/m ³ , 50 ppm IOELV, Sk
-----	---

- **Additional information:** Based on information valid at the time of writing.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from food, drink and animal feedingstuffs.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid close or long term contact with the skin.
Avoid contact with the eyes.
- **Breathing equipment:**
In case of brief exposure or low pollution (exceeding of TLV) use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
- **Protection of hands:**
Solvent resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves** Natural rubber, NR
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

GB

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

Trade name MS 660

(Contd. of page 3)

9 Physical and chemical properties:

· General Information

Form:	Viscous
Colour:	Clear
Smell:	Characteristic

· Change in condition

Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined

· **Flash point:** -21°C

· **Ignition temperature:** 230.0°C

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive vapour/air mixtures is possible.

· Critical values for explosion:

Lower:	1.3 Vol %
Upper:	12.0 Vol %

· **Vapour pressure at 20°C:** 200.0 hPa

· **Density at 20°C** 0.920 g/cm³

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix

· Viscosity:

dynamic at 20°C: 12500 mPas

· Solvent content:

Organic solvents: 80.0 %

· **Solids content:** 20.0 %

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· **Dangerous reactions** Develops readily flammable vapours / fumes

· **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· **on the skin:** No irritant effect.

· **on the eye:** Irritant effect.

· **Sensitization:** No sensitizing effect known.

· Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

(Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

Trade name MS 660

Irritant

(Contd. of page 4)

12 Ecological information:

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to disposers of hazardous waste.

- **European waste catalogue**

08 04 09	waste adhesives and sealants containing organic solvents or other dangerous substances
----------	--

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

- **ADR/RID-GGVS/E Class:** 3 Flammable liquids.

- **Kemler Number:** 30

- **UN-Number:** 1133

- **Packaging group:** III

- **Label** 3

- **Designation of goods:** 1133 ADHESIVES (with a flash point below 23°C and viscous according 2.2.3.1.4) (vapor pressure at 50°C at most 110 kPa)

- **Maritime transport IMDG/GGVSea:**

- **IMDG/GGVSea Class:** 3

- **UN Number:** 1133

- **Label** 3

- **Packaging group:** III

- **EMS Number:** F-E,S-D

- **Marine pollutant:** No

- **Correct technical name:** ADHESIVES

- **Remarks:** Suitable UN approved container necessary.

- **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** 3

- **UN/ID Number:** 1133

- **Label** 3

- **Packaging group:** III

- **Correct technical name:** ADHESIVES

(Contd. on page 6)

Material Safety Data Sheet

According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

Trade name MS 660

(Contd. of page 5)

· **Remarks:** Suitable UN approved container necessary.

15 Regulatory information

· **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Chemicals (Hazard, Information and Packaging for Supply) (CHIP) Regulations.

· **Code letter and hazard designation of product:**

Xi Irritant

F Highly flammable

· **Risk phrases:**

11 Highly flammable.

36 Irritating to eyes.

66 Repeated exposure may cause skin dryness or cracking.

67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

16 Keep away from sources of ignition - No smoking.

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

24/25 Avoid contact with skin and eyes.

33 Take precautionary measures against static discharges.

60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

· **Technical instructions (air):** This classification is only relevant for Germany and Austria.

Class	Share in %
II	26.7
III	53.3

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The information provided about the product on this Safety Sheet has been compiled from knowledge of the individual constituent.

The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

· **Full text of risk phrases referred to in section 2.**

10 Flammable.

11 Highly flammable.

19 May form explosive peroxides.

20 Harmful by inhalation.

36 Irritating to eyes.

36/37 Irritating to eyes and respiratory system.

66 Repeated exposure may cause skin dryness or cracking.

(Contd. on page 7)

Material Safety Data Sheet
According to 91/155 EC

Printing date 23.06.2003

Reviewed on 16.01.2003

Trade name MS 660

(Contd. of page 6)

67 Vapours may cause drowsiness and dizziness.

· **Department issuing data specification sheet:** Quality Control

· **Contact:**

Rudolf Schiffer

+43 (0) 7242/211770-450

Rudolf.Schiffer@hbfuller.com

GB