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

1.1 Product identifier

Activator
Article number: 04.10190-9046

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

1.2.1 Relevant uses

Primer

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

MAN Truck & Bus AG
Dachauer Straße 667
80995 München / GERMANY
Phone +49 89 1580-0
Fax +49 89 15039-72
E-mail info@man-mn.com

Address enquiries to

Technical information info@man-mn.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (english)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Flam. Liq. 2: H225 Highly flammable liquid and vapour.
Eye Irrit. 2: H319 Causes serious eye irritation.
STOT SE 3: H336 May cause drowsiness or dizziness.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms


Signal word DANGER

Contains: Butanone

Ethyl acetate

Hazard statements

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

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection / face protection.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling EUH066 Repeated exposure may cause skin dryness or cracking.

2004/42/CE 665,1 g/l II B a Preparatory and cleaning (Preparatory) (max. 850 g/l)

2.3 Other hazards

Physico-chemical hazards Vapours may form explosive mixture with air.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards none

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
20 - 40	Ethyl acetate
	CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
20 - 40	Butanone
	CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
5 - <10	n-Butyl acetate
	CAS: 123-86-4, EINECS/ELINCS: 204-658-1, EU-INDEX: 607-025-00-1, Reg-No.: 01-2119485493-29-XXXX
	GHS/CLP: Flam. Liq. 3: H226 - STOT SE 3: H336
5 - <10	Tris(p-isocyanatophenyl) thiophosphate
	CAS: 4151-51-3, EINECS/ELINCS: 223-981-9
	GHS/CLP: Acute Tox. 4: H302
0,1 - <0,25	n-Hexane
	CAS: 110-54-3, EINECS/ELINCS: 203-777-6, EU-INDEX: 601-037-00-0, Reg-No.: 01-2119480412-44-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Repr. 2: H361f - Asp. Tox. 1: H304 - STOT RE 2: H373 - Skin Irrit. 2: H315 - STOT SE 3: H336 - Aquatic Chronic 2: H411

Comment on component parts For full text of H-statements: see SECTION 16.
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Consult a doctor immediately.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Headache
Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide.
Dry powder.
Foam.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.
Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide good room ventilation even at ground level (vapours are heavier than air).

Keep away from all sources of ignition - Refrain from smoking.
Ignitable mixtures can be formed in the empty container.
Take precautionary measures against static discharges.
Vapours can form an explosive mixture with air.
Apparates and equipments must be conform in accordance to standard of storage and handling of flammable products.
Connect equipment to earth.

Do not eat, drink, smoke or take drugs at work.
Take off contaminated clothing and wash before reuse.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Provide solvent-resistant and impermeable floor.
Keep only in original container.
Prevent penetration into the ground.
Provide floor with bunding.

Do not store together with oxidizing agents.

Keep container in a well-ventilated place.
Keep container tightly closed.
Protect from heat/overheating.
Keep in a cool place. Store in a dry place.
Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
n-Butyl acetate
CAS: 123-86-4, EINECS/ELINCS: 204-658-1, EU-INDEX: 607-025-00-1, Reg-No.: 01-2119485493-29-XXXX
Long-term exposure: 150 ppm, 724 mg/m³
Short-term exposure (15-minute): 200 ppm, 966 mg/m³
Ethyl acetate
CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
Long-term exposure: 200 ppm, 730 mg/m³
Short-term exposure (15-minute): 400 ppm, 1460 mg/m³
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Long-term exposure: 200 ppm, 600 mg/m³, Sk, BmgV
Short-term exposure (15-minute): 300 ppm, 899 mg/m³
n-Hexane
CAS: 110-54-3, EINECS/ELINCS: 203-777-6, EU-INDEX: 601-037-00-0, Reg-No.: 01-2119480412-44-XXXX
Long-term exposure: 20 ppm, 72 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Ethyl acetate
CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-No.: 01-2119475103-46-XXXX
Eight hours: 200 ppm, 734 mg/m³
Short-term (15-minute): 400 ppm, 1468 mg/m³
Butanone
CAS: 78-93-3, EINECS/ELINCS: 201-159-0, EU-INDEX: 606-002-00-3, Reg-No.: 01-2119457290-43-XXXX
Eight hours: 600 mg/m³
Short-term (15-minute): 300 ppm, 900 mg/m³
n-Hexane
CAS: 110-54-3, EINECS/ELINCS: 203-777-6, EU-INDEX: 601-037-00-0, Reg-No.: 01-2119480412-44-XXXX
Eight hours: 20 ppm, 72 mg/m³

DNEL

Substance
n-Butyl acetate, CAS: 123-86-4
Industrial, dermal, Acute - local effects: 11 mg/kg bw/day.
Industrial, dermal, Long-term - systemic effects: 11 mg/kg bw/day.
Industrial, inhalative (vapor), Acute - local effects: 600 mg/m³.
Industrial, inhalative (vapor), Long-term - local effects: 300 mg/m³.
Industrial, inhalative (vapor), Long-term - systemic effects: 300 mg/m³.
general population, oral, Long-term - systemic effects: 2 mg/kg bw/day.
general population, dermal, Acute - local effects: 6 mg/kg bw/day.
general population, dermal, Long-term - systemic effects: 6 mg/kg bw/day.
general population, inhalative (vapor), Long-term - local effects: 35,7 mg/m³.
general population, inhalative (vapor), Acute - local effects: 300 mg/m³.
general population, inhalative (vapor), Long-term - systemic effects: 35,7 mg/m³.

general population, oral, Acute - local effects: 2 mg/kg bw/day.
n-Hexane, CAS: 110-54-3
Industrial, dermal, Long-term - systemic effects: 11 mg/kg bw/day.
Industrial, inhalative, Long-term - systemic effects: 75 mg/m³.
general population, dermal, Long-term - systemic effects: 5,3 mg/kg bw/day.
general population, oral, Long-term - systemic effects: 4 mg/kg bw/day.
general population, inhalative, Long-term - systemic effects: 16 mg/m³.
Ethyl acetate, CAS: 141-78-6
Industrial, dermal, Long-term - systemic effects: 63 mg/kg bw/d.
Industrial, inhalative, Acute - local effects: 1468 mg/m³.
Industrial, inhalative, Acute - systemic effects: 1468 mg/m³.
Industrial, inhalative, Long-term - local effects: 734 mg/m³.
Industrial, inhalative, Long-term - systemic effects: 734 mg/m³.
general population, dermal, Long-term - systemic effects: 37 mg/kg bw/d.
general population, oral, Long-term - systemic effects: 4,5 mg/kg bw/d.
general population, inhalative, Long-term - systemic effects: 367 mg/m³.
general population, inhalative, Long-term - local effects: 367 mg/m³.
general population, inhalative, Acute - systemic effects: 734 mg/m³.
general population, inhalative, Acute - local effects: 734 mg/m³.

PNEC

Substance
n-Butyl acetate, CAS: 123-86-4
soil, 0,0903 mg/kg.
sediment (seaater), 0,0981 mg/kg.
sediment (freshwater), 0,981 mg/kg.
sewage treatment plants (STP), 35,6 mg/l.
seawater, 0,018 mg/l.
freshwater, 0,18 mg/l.
Ethyl acetate, CAS: 141-78-6
sewage treatment plants (STP), 650 mg/l.
soil, 0,22 mg/kg.
sediment (seaater), 0,034 mg/kg.
sediment (freshwater), 0,34 mg/kg.
seawater, 0,026 mg/l.
freshwater, 0,26 mg/l.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,7 mm Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Solvent-resistant protective clothing.
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Respiratory protection mask in the event of high concentrations. Multi-purpose filter ABEK. (DIN EN 14387)
Thermal hazards	no
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	colourless
Odor	characteristic
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	77
Flash point [°C]	- 4 (DIN 51755)
Flammability (solid, gas) [°C]	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	9,73 (20 °C)
Density [g/ml]	0,9 (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	not determined
Viscosity	20 - 30 mPa.s (20 °C)
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not applicable
Decomposition temperature [°C]	not determined

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Evolution of highly flammable gases/vapours.
Uncleaned empty vessels may contain product gases which can form explosive mixtures with air.
Reactions with strong oxidizing agents.

10.4 Conditions to avoid

See SECTION 7
Strong heating.

10.5 Incompatible materials

not determined

10.6 Hazardous decomposition products

In the case of heating following (decomposition) products may occure:
Isocyanate

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.:
dermal, Based on the available information, the classification criteria are not fulfilled.:
ATE-mix, oral, > 2000 mg/kg.

Substance
Butanone, CAS: 78-93-3
LD50, dermal, Rabbit: > 5000 mg/kg (Lit.).
LD50, oral, Rat: 3300 mg/kg (Lit.).
LC50, inhalative, Rat: > 20 mg/l/4h (Lit.).
n-Butyl acetate, CAS: 123-86-4
LD50, dermal, Rabbit: >14112 mg/kg (OECD 402).
LD50, oral, Rat: 10760 mg/kg (OECD 423).
LC50, inhalative, Rat: 23.4 mg/l (4h) (OECD 403).
n-Hexane, CAS: 110-54-3
LD50, dermal, Rabbit: 3000 mg/kg bw (IUCLID).
LD50, oral, Rat: 25000 mg/kg bw (GESTIS).
LC50, inhalative, Rat: 169 mg/L (4h) (GESTIS).
Ethyl acetate, CAS: 141-78-6
LD50, dermal, Rabbit: >20000 mg/kg bw.
LD50, oral, Rat: 5620 mg/kg bw.
LC50, inhalative, Rat: 58 mg/l (8 h).

Serious eye damage/irritation
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Irritant
Calculation method

Skin corrosion/irritation
Does not contain a relevant substance that meets the classification criteria.

Respiratory or skin sensitisation
Does not contain a relevant substance that meets the classification criteria.

Specific target organ toxicity — single exposure
Based on the available information, the classification criteria are fulfilled.
Toxicological data of complete product are not available.
Vapours may cause drowsiness and dizziness.
Calculation method

Specific target organ toxicity — repeated exposure
Does not contain a relevant substance that meets the classification criteria.

Mutagenicity
Does not contain a relevant substance that meets the classification criteria.

Reproduction toxicity
Based on available data, the classification criteria are not met.
Toxicological data of complete product are not available.
Calculation method

Carcinogenicity
Does not contain a relevant substance that meets the classification criteria.

Aspiration hazard
Does not contain a relevant substance that meets the classification criteria.

General remarks
Frequent persistent contact with the skin can cause skin irritation.

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Butanone, CAS: 78-93-3
LC50, (48h), Leuciscus idus: > 100 mg/l (Lit.).
EC50, (48h), Daphnia magna: > 100 mg/l (Lit.).
n-Butyl acetate, CAS: 123-86-4
LC50, (96h), Pimephales promelas: 18 mg/l (OECD 203).
EC50, (72h), Desmodesmus subspicatus: 647.7 mg/l.
EC50, (48h), Daphnia magna: 44 mg/l.
IC50, Bacteria: 356 mg/l (40 h).
NOEC, Desmodesmus subspicatus: 200 mg/l.
n-Hexane, CAS: 110-54-3
LC50, (96h), Pimephales promelas: 2,5 mg/L (GESTIS).
Ethyl acetate, CAS: 141-78-6
LC50, (96h), Pimephales promelas: 230 mg/l.
EC50, (48h), Desmodesmus subspicatus: 5600 mg/L.
EC50, (48h), Daphnia magna: 165 mg/L.
NOEC, (72h), Desmodesmus subspicatus: >100 mg/L.
NOEC, (21d), Daphnia magna: 2,4 mg/L.

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

not determined

12.4 Mobility in soil

not determined

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Coordinate disposal with the disposal contractor/authorities if necessary.

Waste no. (recommended) 080409*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110*
150102

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	1139
Inland navigation (ADN)	1139
Marine transport in accordance with IMDG	1139
Air transport in accordance with IATA	1139

14.2 UN proper shipping name

Transport by land according to ADR/RID	Coating solution
- Classification Code	F1
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D/E)
Inland navigation (ADN)	Coating solution
- Classification Code	F1
- Label	
Marine transport in accordance with IMDG	Coating solution
- EMS	F-E, S-E
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Coating solution
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	3
Inland navigation (ADN)	3
Marine transport in accordance with IMDG	3
Air transport in accordance with IATA	3

14.4 Packing group

Transport by land according to ADR/RID	II
Inland navigation (ADN)	II
Marine transport in accordance with IMDG	II
Air transport in accordance with IATA	II

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not determined

SECTION 15: Regulatory information

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

EEC-REGULATIONS	1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2017).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	73,9 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H411 Toxic to aquatic life with long lasting effects.
H315 Causes skin irritation.
H373 May cause damage to organs through prolonged or repeated exposure through inhalation.
H304 May be fatal if swallowed and enters airways.
H361f Suspected of damaging fertility.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H336 May cause drowsiness or dizziness.
H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Flam. Liq. 2: H225 Highly flammable liquid and vapour. (On basis of test data)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)

Modified position

none