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

1.1 Product identifier

Inject Crack - Injector, heater plug and spark plug releasing fluid
Article number: 2894440
UFI: 96C6-9046-X20R-62FU

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

1.2.1 Relevant uses

Rust removing agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Normfest GmbH
Siemensstraße 23
42551 Velbert / GERMANY
Phone +49 2051 275-0
Fax +49 2051 275-141
Homepage www.normfest.com
E-mail info@normfest.de

Address enquiries to

Technical information info@normfest.de

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 [REGULATION (GB) CLP]

Aerosol 1: H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.

2.2 Label elements

The determination of properties hazardous to health does not take the propellant or carrier material into account.

Hazard pictograms

Signal word DANGER

Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122°F.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling Contains: Cinnamaldehyde. EUH208 May produce an allergic reaction.

2.3 Other hazards

Environmental hazards

Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
20 - <40	Ethanol
	CAS: 64-17-5
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319
	SCL [%]: >= 50: Eye Irrit. 2: H319
10 - <25	Butane
	CAS: 106-97-8
	GHS/CLP: Flam. Gas 1A: H220 - Press. Gas: H280
1 - <10	Propane
	CAS: 74-98-6
	GHS/CLP: Flam. Gas 1A: H220 - Press. Gas: H280
1 - <5	1-methoxy-2-propanol
	CAS: 107-98-2
	GHS/CLP: Flam. Liq. 3: H226 - STOT SE 3: H336
1 - <5	Acetylacetone
	CAS: 123-54-6
	GHS/CLP: Flam. Liq. 3: H226 - Acute Tox. 4: H302
1 - <5	Methyl salicylate
	CAS: 119-36-8
	GHS/CLP: Acute Tox. 4: H302
0,1 - <1	Cinnamaldehyde
	CAS: 104-55-2
	GHS/CLP: Acute Tox. 4: H312 - Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Eye Irrit. 2: H319

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Change soaked clothing.

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 In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion Do not induce vomiting.
In the event of symptoms seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

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

Water spray jet.
Carbon dioxide.
Foam.
Dry powder.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

risk of formation of toxic pyrolysis products, carbon monoxide (CO), not combusted hydrocarbons
Bursting aerosols can be forcibly projected from a fire.

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.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, diatomaceous earth).
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

Use only in well-ventilated areas.

Keep away from all sources of ignition - Refrain from smoking.
Vapours can form an explosive mixture with air.

Do not eat, drink, smoke or take drugs at work.
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.

Do not store together with oxidizing agents.

Keep container in a well-ventilated place.
Protect from heat/overheating.
Keep in a cool place, heat causes increase in pressure and risk of bursting.

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
Ethanol
CAS: 64-17-5
Long-term exposure: 1000 ppm, 1920 mg/m³
Butane
CAS: 106-97-8
Long-term exposure: 600 ppm, 1450 mg/m³
Short-term exposure (15-minute): 750 ppm, 1810 mg/m³
1-methoxy-2-propanol
CAS: 107-98-2
Long-term exposure: 100 ppm, 375 mg/m³, Sk
Short-term exposure (15-minute): 150 ppm, 560 mg/m³

DNEL

Substance
1-methoxy-2-propanol, CAS: 107-98-2
Industrial, inhalative, Acute - systemic effects, 553,5 mg/m³
Industrial, dermal, Long-term - systemic effects, 183 mg/kg bw/day
Industrial, inhalative, Acute - local effects, 553,5 mg/m³
Industrial, inhalative, Long-term - systemic effects, 369 mg/m³
general population, dermal, Long-term - systemic effects, 78 mg/kg bw/day
general population, oral, Long-term - systemic effects, 33 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 43,9 mg/m³
Butane, CAS: 106-97-8
There are no DNEL values established for the substance.
Propane, CAS: 74-98-6
There are no DNEL values established for the substance.
Ethanol, CAS: 64-17-5
Industrial, inhalative (vapor), Acute - local effects, 1900 mg/m³
Industrial, inhalative (vapor), Long-term - systemic effects, 950 mg/m³
Industrial, dermal, Long-term - systemic effects, 343 mg/kg bw/d
general population, dermal, Long-term - systemic effects, 206 mg/kg bw/d
general population, inhalative (vapor), Long-term - systemic effects, 114 mg/m³
general population, inhalative (vapor), Acute - local effects, 950 mg/m³
general population, oral, Long-term - systemic effects, 87 mg/kg bw/d

PNEC

Substance
1-methoxy-2-propanol, CAS: 107-98-2
soil, 4,59 mg/kg soil dw
sewage treatment plants (STP), 100 mg/L
sediment (seawater), 5,2 mg/kg sediment dw
sediment (freshwater), 52,3 mg/kg sediment dw
seawater, 1 mg/L
freshwater, 10 mg/L

Butane, CAS: 106-97-8
There are no PNEC values established for the substance.
Propane, CAS: 74-98-6
There are no PNEC values established for the substance.
Ethanol, CAS: 64-17-5
soil, 0,63 mg/kg
sediment (freshwater), 3,6 mg/kg
seawater, 0,79 mg/l
freshwater, 0,96 mg/l
oral (food), 0,38 g/kg
sediment (seawater), 2,9 mg/kg
sewage treatment plants (STP), 580 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 Nitrile rubber, >480 min (EN 374-1/-2/-3).
The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection
Not required under normal conditions.

Other
Avoid contact with eyes and skin.
Do not inhale gases/vapours/aerosols.
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
In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.
Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)

Thermal hazards
See SECTION 7.

Delimitation and monitoring of the environmental exposition
See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	aerosol
Color	yellow
Odor	characteristic
Odour threshold	not determined
pH-value	5,0 - 7,0
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not determined
Lower explosion limit	1,4 Vol.%
Upper explosion limit	15 Vol.%
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	270
Density [g/cm³]	0,75 (20 °C / 68,0 °F)
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	not applicable
Auto-ignition temperature	340
Decomposition temperature [°C]	not applicable
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Risk of bursting.
Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity not determined

Substance
1-methoxy-2-propanol, CAS: 107-98-2
LD50, oral, Rat, 4016 mg/kg bw
Methyl salicylate, CAS: 119-36-8
LD50, oral, Rat, 887 mg/kg bw (IUCLID)
Ethanol, CAS: 64-17-5
LD50, oral, Rat, 10470 mg/kg (OECD 401)
Acetylacetone, CAS: 123-54-6
LD50, oral, Rat, 575 mg/kg (Lit.)

Acute dermal toxicity not determined

Substance
1-methoxy-2-propanol, CAS: 107-98-2
LD50, dermal, Rat, >2000 mg/kg bw
Methyl salicylate, CAS: 119-36-8
LD50, dermal, Rat, >2500 mg/kg bw (IUCLID)
Ethanol, CAS: 64-17-5
LD50, dermal, Rabbit, > 2000 mg/kg (OECD 402)
Acetylacetone, CAS: 123-54-6
LD50, dermal, Rat, 790 mg/kg (Lit.)

Acute inhalational toxicity not determined

Substance
1-methoxy-2-propanol, CAS: 107-98-2
LC50, inhalative, Rat, 7000 ppm (6 h)
Butane, CAS: 106-97-8
LC50, inhalative, Rat, 658 mg/L (IUCLID)
Propane, CAS: 74-98-6
LC50, inhalative, Rat, > 1443 mg/l (15 min) (Lit.)
Ethanol, CAS: 64-17-5
LC50, inhalative, Rat, 117-125 mg/l/4h (OECD 403)
Acetylacetone, CAS: 123-54-6
LC50, inhalative, Rat, 5,1 mg/l (4h) (Lit.)

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Substance
Butane, CAS: 106-97-8
Eye, non-irritating
Propane, CAS: 74-98-6
Eye, non-irritating
Ethanol, CAS: 64-17-5
Eye, Rabbit, OECD 405, irritant

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Substance
Butane, CAS: 106-97-8
dermal, non-irritating
Propane, CAS: 74-98-6
dermal, non-irritating
Ethanol, CAS: 64-17-5
dermal, Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.
May cause an allergic skin reaction.

Substance
Butane, CAS: 106-97-8
inhalative, non-sensitizing
dermal, non-sensitizing
Propane, CAS: 74-98-6
inhalative, non-sensitizing
dermal, non-sensitizing
Ethanol, CAS: 64-17-5
dermal, Guinea pig, OECD 406, non-sensitizing

Specific target organ toxicity — single exposure

Based on available data, the classification criteria are not met.

Substance
Butane, CAS: 106-97-8
inhalative, non-irritating
Propane, CAS: 74-98-6
inhalative, non-irritating
Ethanol, CAS: 64-17-5
inhalative, Rat (male), NOAL >20 mg/l, OECD 403
NOAEL, oral, Rat (female), 1730 mg/kg/d, OECD 408, 90d

Specific target organ toxicity — repeated exposure

Based on available data, the classification criteria are not met.

Substance
Propane, CAS: 74-98-6
NOAEC, inhalative, Rat, 4437 mg/m³
Ethanol, CAS: 64-17-5
NOAEL, oral, Rat, 1730 mg/kg bw/day, negativ

Mutagenicity

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

Substance
Ethanol, CAS: 64-17-5
mouse, OECD 476, negativ
OECD 471, negativ
Ames-test, negativ

Reproduction toxicity

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

Substance
Ethanol, CAS: 64-17-5

NOAEL, oral, mouse, 13800 mg/kg bw/day, OECD 416, negativ

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

Substance
Ethanol, CAS: 64-17-5
NOAEL, oral, Rat, > 3000 mg/kg bw/day, negativ

Aspiration hazard Based on available data, the classification criteria are not met.

General remarks

Toxicological data of complete product are not available.
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
1-methoxy-2-propanol, CAS: 107-98-2
LC50, (96h), fish, 6,812 g/L
EC50, (48h), Crustacea, 23,3 g/L
Methyl salicylate, CAS: 119-36-8
EC50, (24h), Daphnia magna, 50 mg/L (IUCLID)
Ethanol, CAS: 64-17-5
LC50, (96h), Oncorhynchus mykiss, 13000 mg/l (OECD 203)
LC50, (48h), Daphnia magna, 12340 mg/l
EC50, (72h), Algae, 275 mg/l (OECD 201)
EC50, (48h), Selenastrum capricornutum, 12900 mg/l (OECD 201)
Acetylacetone, CAS: 123-54-6
LC50, (96h), Lepomis macrochirus, 60,1 mg/l (ECOTOX Database)
EC5, (16h), Pseudomonas putida, 67 mg/l (IUCLID)
IC5, (8d), Scenedesmus quadricauda (algea), 2,7 mg/l (IUCLID)

12.2 Persistence and degradability

Behaviour in environment compartments not determined

Behaviour in sewage plant not applicable

Biological degradability not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with national regulations.

Product

Dispose of as hazardous waste.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	1950
Inland navigation (ADN)	1950
Marine transport in accordance with IMDG	1950
Air transport in accordance with IATA	1950

14.2 UN proper shipping name

Transport by land according to ADR/RID	Aerosols
- Classification Code	5F
- Label	
- ADR LQ	1 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (D)
Inland navigation (ADN)	Aerosols
- Classification Code	5F
- Label	
Marine transport in accordance with IMDG	Aerosols
- EMS	F-D, S-U
- Label	
- IMDG LQ	1 l
Air transport in accordance with IATA	Aerosols, flammable
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	2
Inland navigation (ADN)	2
Marine transport in accordance with IMDG	2.1
Air transport in accordance with IATA	2.1

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

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 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	78,2 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 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
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
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
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
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

16.2 Other information

Classification procedure

Aerosol 1: H222 Extremely flammable aerosol. (Bridging principle "Aerosols") H229 Pressurised container: May burst if heated. (Bridging principle "Aerosols")

Modified position

SECTION 2 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 8 been added: In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.

SECTION 8 deleted: Respiratory protection mask in the event of high concentrations.

SECTION 9 been added: not applicable

SECTION 11 been added: none

SECTION 11 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 12 been added: Contains no ingredients with endocrine-disrupting properties.