SAFETY DATA SHEET

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

1.1. Product identifier

Trade name
609-3 - Activator for Headlight, 8.16
Product no.
609-3
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 for clearcoat headlight repair

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
2016-07-12
SDS Version
1.0

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. 3; H226
Skin Sens. 1; H317
Resp. Sens. 1; H334
Acute. Tox. 4; H302 + H332
Eye Irrit. 2; H319
Skin Irrit. 2; H315
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)

Flammable liquid and vapour. (H226)
May cause an allergic skin reaction. (H317)
May cause allergy or asthma symptoms or breathing difficulties if inhaled. (H334)
Harmful if swallowed or if inhaled. (H302 + H332)
Causes serious eye irritation. (H319)
Causes skin irritation. (H315)
May cause drowsiness or dizziness. (H336)
May cause respiratory irritation. (H335)

Safety statement(s)

General	-
Prevention	Avoid breathing mist/vapours/fume/spray. (P261). Wear protective gloves/protective clothing/eye protection. (P280). [In case ofinadequate ventilation] wear respiratory protection. (P284).
Response	IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304+P340). If experiencing respiratory symptoms: Call a POISON CENTER/doctor (P342+P311).
Storage	-
Disposal	-

Identity of the substances primarily responsible for the major health hazards

n-butyl acetate, Ethylbenzene, hexamethylendiisocyanat, p-toluenesulphonyl isocyanate, Poly Hexamethylene Diisocyanate, 2-methoxy-1-methylethyl acetate, p-xylene

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

-

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME:	Poly Hexamethylene Diisocyanate
IDENTIFICATION NOS.:	CAS-no: 28182-81-2 EC-no: 927-271-6 REACH-no: 01-2119485796-17
CONTENT:	25-40%
CLP CLASSIFICATION:	Acute Tox. 4, STOT SE 3, Eye Irrit. 2, Skin Sens. 1 H317, H319, H332, H335
NOTE:	P

NAME:	n-butyl acetate
IDENTIFICATION NOS.:	CAS-no: 123-86-4 EC-no: 204-658-1 REACH-no: 01-2119485493-29 Index-no: 607-025-00-1
CONTENT:	15-25%
CLP CLASSIFICATION:	Flam. Liq. 3, STOT SE 3 H226, H336, EUH066
NOTE:	S

NAME:	p-xylene
IDENTIFICATION NOS.:	CAS-no: 1330-20-7 EC-no: 215-535-7 Index-no: 601-022-00-9
CONTENT:	10-15%
CLP CLASSIFICATION:	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2

	H226, H312, H315, H332
NOTE:	S
NAME:	Ethylbenzene
IDENTIFICATION NOS.:	CAS-no: 100-41-4 EC-no: 202-849-4 Index-no: 601-023-00-4
CONTENT:	5-10%
CLP CLASSIFICATION:	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3 H225, H304, H332, H373, H412
NOTE:	S
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:	5-10%
CLP CLASSIFICATION:	Flam. Liq. 3 H226
NOTE:	S
NAME:	hexamethylendiisocyanat
IDENTIFICATION NOS.:	CAS-no: 822-06-0 EC-no: 212-485-8 Index-no: 615-011-00-1
CONTENT:	<1%
CLP CLASSIFICATION:	Acute tox. 3, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3 H315, H317, H319, H331, H334, H335
NOTE:	IS
NAME:	p-toluenesulphonyl isocyanate
IDENTIFICATION NOS.:	CAS-no: 4083-64-1 EC-no: 223-810-8 Index-no: 615-012-00-7
CONTENT:	<1%
CLP CLASSIFICATION:	Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, STOT SE 3 H315, H319, H334, H335, EUH014
NOTE:	I

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

Other informations

ATEmix(inhale, vapour) > 20
ATEmix(inhale, dust/mist) = 3,432 -
ATEmix(inhale, dust/mist) > 20000
ATEmix(dermal) > 2000
ATEmix(oral) = 1107,448 - 1661,172
Eye Cat. 2 Sum = Sum(Ci/S(G)CLi) = 2,8 - 0
Skin Cat. 2 Sum = Sum(Ci/S(G)CLi) = > 1 - 1,44
N chronic (CAT 4) Sum = Sum(Ci/M(chronic)i*25*0.1*10^CAT4) = 0,16 - 0,24

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 injured person into fresh air. Make sure there is always someone with the injured person. Prevent shock by keeping the injured person warm and calm. If the person stops breathing, give mouth-to-mouth resuscitation. If unconscious, roll the injured person onto side with the top leg bent at both knee and hip. Call an ambulance.

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

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

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.
Sensitivity effects: This product contains substances which can give an allergic reaction on contact with skin. The allergic reaction will typically set in 12-72 hours after exposure as the substance penetrates the skin and reacts with proteins in the outer skin. The body's immune system sees the chemically changed protein as a foreign body and will try to destroy it.
Sensitivity effects: This product contains substances which can give an allergic reaction when inhaled. The allergic reaction allergy will typically set in an hour after exposure and give an inflammatory reaction in the lungs.
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 experiencing respiratory symptoms: Call a POISON CENTER/doctor

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. Avoid direct contact with spilled substances. 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. 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. Must be stored in a cool and ventilated area, away from possible sources of combustion.

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.)

Ethylbenzene (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): 100 ppm | 441 mg/m3
Short-term exposure limit (15-minute reference period): 125 ppm | 552 mg/m3
Comments: Sk (Sk = Can be absorbed through skin.)

n-butyl acetate (EH40/2005)
Long-term exposure limit (8-hour TWA reference period): 150 ppm | 724 mg/m3
Short-term exposure limit (15-minute reference period): 200 ppm | 966 mg/m3

DNEL / PNEC

DNEL (n-butyl acetate): 102,34 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - General population

DNEL (n-butyl acetate): 960 mg/m3
Exposure: Inhalation
Duration of Exposure: Short term – Local effects - Workers

DNEL (n-butyl acetate): 960 mg/m3
Exposure: Inhalation
Duration of Exposure: Short term – Systemic effects - Workers

DNEL (n-butyl acetate): 480 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Systemic effects - Workers

DNEL (n-butyl acetate): 480 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Local effects - Workers

DNEL (n-butyl acetate): 859,7 mg/m3
Exposure: Inhalation
Duration of Exposure: Short term – Systemic effects - General population

DNEL (n-butyl acetate): 102,34 mg/m3
Exposure: Inhalation
Duration of Exposure: Long term – Local effects - General population

DNEL (n-butyl acetate): 859,7 mg/m3
Exposure: Inhalation
Duration of Exposure: Short term – Local effects - General population

PNEC (n-butyl acetate): 35,6 mg/L
Exposure: Sewage Treatment Plant

PNEC (n-butyl acetate): 0,18 mg/L
Exposure: Freshwater

PNEC (n-butyl acetate): 0,018 mg/L
Exposure: Marine water

PNEC (n-butyl acetate): 0,36 mg/L
Exposure: Intermittent release

PNEC (n-butyl acetate): 0,981 mg/kg

Exposure: Freshwater sediment

PNEC (n-butyl acetate): 0,0981 mg/kg
Exposure: Marine water sediment

PNEC (n-butyl acetate): 0,09903 mg/kg
Exposure: Soil

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.

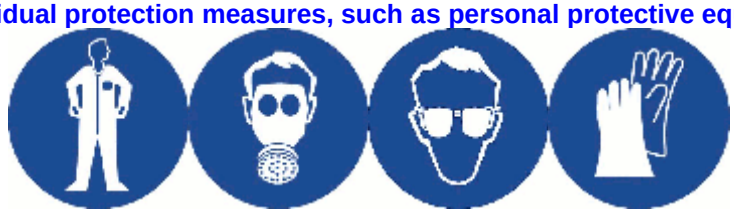
Hygiene measures

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)
24	-	-

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
p-toluenesulphonyl isocyanate	Rat	LD50	Oral	2234 mg/kg
p-toluenesulphonyl isocyanate	Rat	LD50	Intraperitoneal	775 mg/kg
p-toluenesulphonyl isocyanate	Rat	LC50	Inhalation	> 640 ppm
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
Ethylbenzene	Rat	LD50	Oral	3500 mg/kg
Ethylbenzene	Rabbit	LD50		17,8 mL/kg
Ethylbenzene	Guinea pig	LD50	Intraperitoneal	2,624 mL/kg
n-butyl acetate	Rat	LD50	Oral	10768 g/kg
n-butyl acetate	Rabbit	LD50		> 5000 mg/kg
n-butyl acetate	Rat	LD50	Oral	> 6400 mg/kg
n-butyl acetate	Rat	LC50	Inhalation	2000 ppm
n-butyl acetate	Rat	LC50	Inhalation	21.1 mg/l/4h
Poly Hexamethylene Diisocyanat...	Rat	LC50	Inhalation	18500 mg/m3

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
May cause an allergic skin reaction.May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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.
Sensitivity effects: This product contains substances which can give an allergic reaction on contact with skin. The allergic reaction will typically set in 12-72 hours after exposure as the substance penetrates the skin and reacts with proteins in the outer skin. The body's immune system sees the chemically changed protein as a foreign body and will try to destroy it.
Sensitivity effects: This product contains substances which can give an allergic reaction when inhaled. The allergic reaction allergy will typically set in an hour after exposure and give an inflammatory reaction in the lungs.
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
Ethylbenzene	Crustacean	LC50	96 H	13000 µg/L
Ethylbenzene	Daphnia	EC50	24 H	2200 µg/L
Ethylbenzene	Fish	LC50	96 H	14000 µg/L
n-butyl acetate	Daphnia	EC50	24 H	205 mg/L
n-butyl acetate	Fish	LC50	96 H	100 mg/L
n-butyl acetate	Crustacean	LC50	48 h	32000 ug/L

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
n-butyl acetate	Yes	No data available	No data available

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BFC
2-methoxy-1-methylethyl acetat...	No	0,56	No data available
Ethylbenzene	Yes	3,15	No data available
n-butyl acetate	No	1,78	No data available

12.4. Mobility in soil
2-methoxy-1-methylethyl acetat...: Log Koc= 0,521864, Calculated from LogPow (High mobility potential.). Ethylbenzene: Log Koc= 2,572885, Calculated from LogPow (Moderate mobility potential.). n-butyl acetate: Log Koc= 1,487982, 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. This product contains substances which can accumulate in the food chain because they are bioaccumulative substances. Bioaccumulative substances can accumulate in fat tissue and are not easily secreted.

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	1866
14.2. UN proper shipping name	RESIN SOLUTION, flammable
14.3. Transport hazard class(es)	3
14.4. Packing group	III
Notes	-
Tunnel restriction code	D/E

IMDG

UN-no.	1866
Proper Shipping Name	RESIN SOLUTION, flammable
Class	3
PG*	III
EmS	F-E, S-E
MP**	No
Hazardous constituent	-

IATA/ICAO

UN-no.	1866
Proper Shipping Name	RESIN SOLUTION, flammable
Class	3
PG*	III

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
The user of this product must have taken special training in working with polyurethane and epoxy products.

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.
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.
H304 - May be fatal if swallowed and enters airways.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H331 - Toxic if inhaled.
H332 - Harmful if inhaled.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.
EUH014 - Reacts violently with water.
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)

-

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

-