1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE OF THE COMPANY

Trade name: STAR LACK HARDENER HS LVC 1030 NORMAL

Trade reference:
5009-1198 STAR LACK HARDENER HS LVC 1030 NORMAL 2.5 L
5009-1203 STAR LACK HARDENER HS LVC 1030 NORMAL 0.5 L

Relevant identified uses of the substance or mixture and uses advised against:
Use: The hardener for acrylic clear coat. For professional use in car refinish.
Uses advised against: Other than those listed above.

Product use: Hardening agent/ Curing agent

Manufacturer/Supplier:
CAR REPAIR SYSTEM S.A.
Centro de Empresas Granada
Polígono Industrial La Ermita
Edif. B - 2ª Planta - Oficinas 35 y 38
18230 ATARFE (Granada) - España

Emergency telephone number of the company and/or of an authorised advisory centre: 00.34.902.180.470
World directory of poisons centres: www.who.int/gho/phe/chemical_safety/poisons_centres/en/

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Directive 67/548/EEC

Xn Harmful
R 20 Harmful by inhalation
Xi Irritant
R 37 Irritating to respiratory system

R 10 Flammable
R 43 May cause sensitization by skin contact
R 66 Repeated exposure may cause skin dryness or cracking

Information concerning particular hazards for human and environmental:
Vapors of product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration. Heightened risk of fire and danger of explosion at accumulation in lower-lying or closed rooms. Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided. At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent. Has a narcotizing effect. The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Label elements
Labeling according to EU guidelines:
The product has been classified and marked in accordance with EU Directives/ Ordinance on Hazardous Materials

Code letter and hazard designation of product:
Xn Harmful
Risk phrases:
R 10  Flammable.
R 20  Harmful by inhalation.
R 37  Irritating to respiratory system.
R 43  May cause sensitisation by skin contact.
R 66  Repeated exposure may cause skin dryness or cracking.

Security phrases:
S23  Do not breathe vapor/spray.
S24  Avoid contact with skin.
S36/37 Wear suitable protective clothing and gloves.
S51  Use only in well ventilated areas.

Hazard-determining components of labelling: Hexamethylene diisocyanate homopolymer

Special labelling of certain preparations: Contains isocyanates. See information supplied by the manufacturer.

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description: Mixture of substance listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>CAS:</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>28182-81-2</td>
<td>hexamethylene diisocyanate homopolymer</td>
<td>50-100 %</td>
</tr>
<tr>
<td>500-060-2</td>
<td>Xn, Xi; R 20-37-43 Acute Tox. 4, H332; Skin Sens. 1, H317, STOT SE 3, H335</td>
<td></td>
</tr>
<tr>
<td>EINECS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500-060-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REG NO:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-2119485796-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-2119488934-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>123-86-4</td>
<td>n-butyl acetate</td>
<td>10-25 %</td>
</tr>
<tr>
<td>EINECS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>204-658-1</td>
<td>R 10-66-67 Flam. Liq. 3, H226; STOT SE 3, H336</td>
<td></td>
</tr>
<tr>
<td>REG NO:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-2119485493-29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-43-0</td>
<td>heptan-2-one</td>
<td>10-20 %</td>
</tr>
<tr>
<td>EINECS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>203-767-1</td>
<td>Xn; R 10-20/22 Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H302</td>
<td></td>
</tr>
<tr>
<td>WE:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212-485-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>822-06-0</td>
<td>diizocyjanian heksano-1,6-dilyu</td>
<td>&lt;0,5 %</td>
</tr>
<tr>
<td>EINECS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212-485-8</td>
<td>T, Xi; R 23-36/37/38-42/43 Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335</td>
<td></td>
</tr>
</tbody>
</table>

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

4. FIRST AID MEASURES

Description of first aid measures

General information:
Personal protection for the First Aider. Take affected persons out of danger area and lay down. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:
Supply fresh air. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:**
Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor. Use skin protection cream for skin protection.

**After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:**
Rinse out mouth. Do not induce vomiting: call for medical immediately.

**Most important symptoms and effects, both acute and delayed**
Vapors are harmful to mucous membranes of the respiratory system. They cause pains and the giddiness, nausea, vomiting. When significant concentrations of vapor or directly entering the eyes may experience mild irritation, redness, tearing, burning, pain. Product ingestion causes abdominal pain, vomiting. May experience disorders of the nervous system, chronic conjunctivitis, and sometimes smell disorders, inflammation of upper respiratory tract with pain in the throat, chronic skin inflammation.

**Indication of any immediate medical attention and special treatment needed**
The workplace should be equipped with a shower and eye wash position.

**5. FIREFIGHTING MEASURES**

**Extinguishing media**
**Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet.

**Special hazards arising from the substance or mixture**
Nitrogen oxides (NOX).
Hydrogen cyanide (HCN).
Carbon monoxide and carbon dioxide.

During heating or in case of fire poisonous gases are produced. Can form explosive gas-air mixtures.

**Advice for firefighters**
**Protective equipment:** Wear self-contained respiratory protective devices. Wear full protective suit.

**Additional information:**
Cool endangered receptacles with water spray.
Remove undamaged containers from the danger zone.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulation.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Person-related safety precautions:**
Wear protective equipment. Keep unprotected person away. Ensure adequate ventilation. Keep away from ignition sources. Use respiratory protective device against the effects of fumes/dust/aerosol. Avoid contact with the eyes and skin.

**Environmental precautions**
Do not allow to enter sewers/ surface or ground water. Inform respective authorities in case of seepage into water course or sewage system.

**Methods and material for containment and cleaning up**
Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information

7. HANDLING AND STORAGE

Precautions for safe handling
Keep receptacles tightly sealed. Ensure good ventilation/exhaustion at the workplace. Do not inhale gases/fumes/aerosols. Avoid contact with the eyes and skin. Use respiratory protective device against the effects of fumes/dust/aerosol.
Adhere to the workplace limit values and/or other threshold values.

Information about fire- and explosion protector:
Vapors of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration. Fumes can combine with air to form an explosive mixture. Keep ignition sources away – Do not smoke. Anti-explosion protection required. Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles:
Store only in original receptacle. Store in a cool location.

Information about storage in use common storage facility:
Store away from foodstuffs. Pls. refer to section 10

Further information about storage conditions:
Store in cool, dry conditions in well sealed receptacles. Protect from heat and direct sunlight. Store receptacle in a well ventilated areas. Protect from humidity and water. Keep ignition sources away - Do not smoke.

Specific end use(s)
No information about the applications other than those mentioned in section 1.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities. No further data: see item 7

Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
<th>WEL (Great Britain)</th>
<th>WEL (Great Britain)</th>
<th>WEL (Great Britain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26182-81-2 hexamethylene diisocyanate homopolymer; 822-06-0 diizocyjanian heksano-1,6-diylu</td>
<td>Short-term value: 0,07 mg/m3</td>
<td>Long-term value: 0,02 mg/m3</td>
<td>Sen; as - NCO</td>
</tr>
<tr>
<td>123-86-4 n-butyl acetate</td>
<td>Short-term value: 966 mg/m3, 200 ppm</td>
<td>Long-term value: 724 mg/m3, 150 ppm</td>
<td></td>
</tr>
<tr>
<td>110-43-0 heptan-2-one</td>
<td>Short-term value: 475 mg/m3, 100 ppm</td>
<td>Long-term value: 237 mg/m3, 50 ppm</td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>Short-term value: 475 mg/m3, 100 ppm</td>
<td>Long-term value: 238 mg/m3, 50 ppm</td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>Additional information: The lists valid during the making were used as basis.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
hexamethylene diisocyanate homopolymer
DNEL - workers, long-term - inhalation, local effects - 0,5 mg/m³
DNEL - workers, short-term - inhalation, local effects - 1,0 mg/m³
PNEC - freshwater environment - 0,127 mg/l
PNEC - marine environment - 0,0127 mg/l
PNEC - sewage treatment plants - 38,28 mg/l
PNEC - soil 53182 mg/kg
PNEC - sediment 266700 mg/kg

n-butyl acetate:
DNEL - workers, long-term - dermal - 7 mg/kg bw/day
DNEL - workers, long-term - inhalation - 48 mg/m³
PNEC - freshwater environment - 0,18 mg/l
PNEC - marine environment - 0,018 mg/l
PNEC - intermittent releases - 0,36 mg/l
PNEC - sewage treatment plants - 35,6 mg/l
PNEC - freshwater sediment environment - 0,981 mg/kg
PNEC - marine sediment environment - 0,981 mg/l
PNEC - soil - 0,0903 mg/kg

Exposure controls

Personal protective equipment:

General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Do not eat, drink, smoke or sniff while working. Do not inhale gases/ fumes/ aerosols. Avoid contact with the eyes and skin. Wash hands before breaks and at and the end of work.

Respiratory protection:
Adhere to the workplace limit values and / or other threshold values. In case of brief exposure or low pollution use respiratory filter device.In case of intensive or larger exposures use self-contained respiratory protection device. Filter A/P2

Protection of hands:
To avoid skin problems reduce the wearing of gloves to the required minimum. Check the permeability prior to each anewed use of the gloves. The glove material has to be impermeable and resistant to the product / the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Wear suitable gloves tested to EN 374.

Material of gloves:
Butyl rubber, IIR
PVA gloves
Nitrile rubber, NBR

The selection of the suitable gloves does notonly depend on the material but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material
Value for the permeation: Level 6( ≥480 min).
The exact break throughtime has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles
Body protection: Protective work clothing.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance
Form: Fluid
Color: Colourless
Odour: Characteristic
Odour threshold: Undetermined
pH: Undetermined
Melting point/freezing point: Undetermined
Initial boiling point and boiling range: Undetermined
Flash point: > 23 °C
Evaporation rate: Undetermined
Flammability: The mixture is flammable
Upper/lower flammability or explosive limits
Lower: 1,0 VOL %
Upper: 10,4 VOL %
Vapour pressure: Undetermined
Vapour density: Undetermined
Relative density: ~1,00
Solubility(ies): Not miscible or difficult to mix in water.
Partition coefficient n-octanol/water: Undetermined
Auto-ignition temperature: 370ºC
Decomposition temperature: Undetermined
Viscosity: < 40 s (ISO 6mm)
Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures is possible
Oxidising properties: Undetermined
Other information: Not available

10. STABILITY AND REACTIVITY

Reactivity
No reactivity if used according to specifications.

Chemical stability
Stable under normal conditions of use and storage.

Possibility of hazardous reactions
Fumes can combine with air to form an explosive mixture.

Conditions to avoid
High temperature, ignition sources, open flame.

Incompatible materials

Hazardous decomposition products
Carbon monoxide and carbon dioxide, nitrogen oxides (NOX), hydrogen cyanide (HCN). Formation of toxic gases is possible during heating or in case of fire.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:

<table>
<thead>
<tr>
<th>LD50/ LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>123-86-4 n-butyl acetate</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>LD50</td>
</tr>
<tr>
<td>10760 mg/ kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>LD50</td>
</tr>
<tr>
<td>&gt; 14000 mg/ kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
<tr>
<td>LC50/4 h</td>
</tr>
<tr>
<td>&gt; 21,0 mg/ l (rat)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
- On the skin: Irritant to skin and mucous membranes. Repeated exposure may cause skin dryness or cracking.
- On the eye: Irritating effect.
- Additional toxicological information: Vapours may cause drowsiness and dizziness. Has a narcotizing effect.

12. ECOLOGICAL INFORMATION

Toxicity
Do not allow product to reach ground water, water course or sewage system.

Persistence and degradability
- hexamethylene diisocyanate homopolymer - not readily biodegradable
- n-butyl acetate - readily biodegradable

Bioaccumulative potential
- Octanol-water partition coefficient (Kow): hexamethylene diisocyanate homopolymer: 9,81
- n-butyl acetate: 2,3

Bioconcentration factor (BCF):
- hexamethylene diisocyanate homopolymer: BCF = 3,2
- n-butyl acetate: BCF = 15,3

Mobility in soil
No further relevant information available.

Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

Other adverse effects
No further relevant information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:
Recommendation:
Must not to disposal together with household garbage. Do not allow product to reach sewage system.

Disposal was be made according to official regulations.

European waste catalogue
- 08 01 11*: waste paint and varnish containing organic solvents or other dangerous substances

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

UN-Number: 1263
UN proper shipping name: 1263 PAINT RELATED MATERIAL
Transport hazard class(es): 3
Packaging group: III
Hazard label: 3

Environmental hazards: the product does not pose a risk to the environment in accordance with the criteria in the UN Model Regulations.

Special precautions for user: Warning: Flammable liquids. Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

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

National regulations:

Information about limitation of use:
Employment restrictions concerning juveniles must be observed
Employment restrictions concerning pregnant and lactating women must be observed.

Chemical safety assessment:
A Chemical Safety Assessment has been carried out for hexamethylene diisocyanate homopolymer.

16. OTHER INFORMATION

Relevant R-phrases:
R 10  Flammable.
R 20  Harmful by inhalation.
R 20/22 Harmful by inhalation and if swallowed.
R 23  Toxic by inhalation.
R 37  Irritating to respiratory system.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 42/43 May cause sensitization by inhalation and skin contact.
R 43  May cause sensitization by skin contact.
R 66  Repeated exposure may cause skin dryness or cracking.
R 67  Vapors may cause drowsiness and dizziness.
H 226  Flammable liquid and vapor.
H 302  Harmful if swallowed.
H 315  Causes skin irritation.
H 317  May cause an allergic skin reaction.
H 319  Causes serious eye irritation.
H 331  Toxic if inhaled.
H 332  Harmful if inhaled.
H 334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H 335  May cause respiratory irritation.
H 336  May cause drowsiness or dizziness.

The detailed information is based on our knowledge until the date above indicated. Those security details refer exclusively to the indicated product and do not constitute a guarantee of particular qualities.
The user must ensure the adequacy and accuracy of such information in relation to the specific use that should be made of the product. This sheet cancels and replaces any previous edition.