

Henkel Makroflex AS

Product Handling and Storage Instructions

Version Dec. 2012

One component aerosol polyurethane foams and expanding adhesives

UN No 1950 | ADR/RID class 2 | IMDG class 2.1 | IATA Packaging instructions 203

GENERAL INSTRUCTIONS

Aerosol cans contain flammable propellants, which are heavier than air. Transportation and storage of one component aerosol cans must be done according to the legislation concerning aerosols containing flammable propellants.

Warehouse for storage of the products must be equipped with legally required fire safety and sprinkler systems. The warehouse must be dry and covered and the storing temperature between +5 °C - +25 °C, temperatures below - 20 °C and above + 50 °C must be strictly prevented.

The pallets are always to be stored in an upright position, on a horizontally straight, hard and dry base in a way that the cartons are protected from moisture. The pallets can be piled, depending on the respective product (rf respective pallet sheet), with sandwich plate of a minimal thickness of 10 mm with minimal flexural strength of 12,5 N/mm² placed in between them if so indicated.

TRANSPORTATION

Possibility of piling of the pallets during transportation is depending of respective product (shown on each pallet sheet). Maximal pile is limited with two pallets in all cases. The movement of pallets has to be prevented and they have to be protected from rain and excessive moisture.

Lowest allowed temperature – 20 °C for a short time, up to 1 week e.g. during transportation. Avoid strictly temperatures below - 20 °C and above + 50 °C. Lifting and transfer of the pallets has to be done carefully and precisely. The cartons are always to be stored in an upright position.

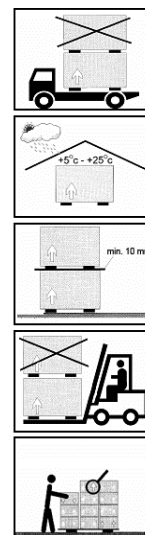
Transportation of odd cans by passenger car: leave the container wrapped in a cloth in the trunk, never in the passengers' compartment.

Transportation in intermodal containers: all pallets must be fixed to avoid movement. Transportation of loose, unsecured cartons within container is not allowed, all cartons must be fixed (wrapped) on pallet fully secured against movement. Last row of pallets must be secured in a way to prevent occasional fallout when container doors are opened.

During long-distance transportation via sea-freight strict attention to humidity levels and temperature must be paid, temperatures below - 20 °C and above + 50 °C must be strictly prevented. Ventilation of the containers must be ensured to keep VOC levels within required limits.

STORAGE

Store in a cool and dry place. For longest shelf life the warehouse must be dry and covered and the storing temperature between +5 °C ... +25 °C (lowest allowed temperature – 20 °C for a short time, up to 1 week e.g. during transportation). Always store and transport the can in a vertical position with the valve pointed upwards. Protect from direct sunlight and strictly prevent temperatures



below - 20 °C and above + 50 °C. Guaranteed shelf life of 9/12/15/18 months (depending on the product) after production date is valid only if the storage and handling instructions are fully followed.

DISPOSAL OF PACKAGING MATERIALS

The wooden pallet used during transportation can be burnt and PE plastic packing film can be taken to a waste disposal plant. **Product disposal:** dispose of waste and residues in accordance with local authority requirements. **Uncleaned packages:** Completely empty pressurized gas containers (including propellant gas). Only empty containers are to be disposed of as recoverable materials.

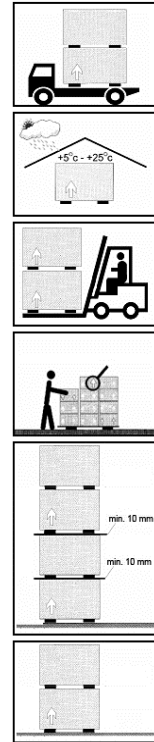
EMERGENCY ACTIONS

Avoid contact with skin and eyes. Ensure adequate ventilation. Wear protective equipment.

Cleaning up spillage: hardened PU foam/adhesive should be removed mechanically. Wear protective gloves, in a poorly ventilated area a facemask must be worn. Acetone can be used as solvent for any uncured spillage of PU foam.

Firefighting recommendations: The temperature of the containers should not be allowed to exceed +50 °C, at which point they are liable to explode. Under these circumstances water should be used as a cooling agent. In event of fire extinguishing foam is recommended.

Check MSDS or TDS of respective product for further information!



Silicone sealants | Bitumen sealants

GENERAL INSTRUCTIONS

The warehouse to store the products must be dry and covered and the **storing temperature between +5 °C - +25 °C, temperatures below - 20 °C and above + 50 °C must be strictly prevented** to ensure guaranteed shelf life of the product.

The pallets are **preferably to be stored in an upright position**, on a horizontally straight, hard and dry base, the cartons must be protected from moisture. The pallets can be piled, depending on the respective product (rf respective pallet sheet), with sandwich plate of a minimal thickness of 10 mm with minimal flexural strength of 12,5 N/mm² placed in between them if so indicated.

Silicone sealant can tolerate freezing temperatures during transportation, the factor limiting the freeze-thaw cycles is cartridge material, which can easily broke when frozen continuously.

TRANSPORTATION

Possibility of piling of the pallets during transportation is depending of respective product (shown on each pallet sheet). **Maximal pile is limited with two pallets in all cases.** The movement of pallets has to be prevented and they have to be protected from rain and excessive moisture.

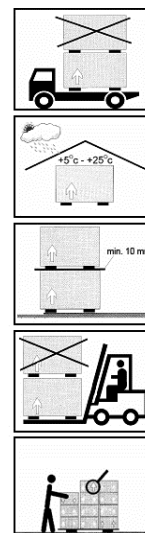
Lowest allowed temperature – 20 °C for a short time, up to 1 week e.g. during transportation. Avoid strictly temperatures below - 20 °C and above + 50 °C. Lifting and transfer of the pallets has to be done carefully and precisely. The cartons are preferably to be stored in an upright position.

Transportation in intermodal containers: all pallets must be fixed to avoid movement. Transportation of loose, unsecured cartons within container is not allowed, all cartons must be fixed (wrapped) on pallet fully secured against movement. Last row of pallets must be secured in a way to prevent occasional fallout when container doors are opened.

During long-distance transportation via sea-freight strict attention to humidity levels and temperature must be paid, **temperatures below - 20 °C and above + 50 °C must be strictly prevented**, as affecting the product quality. Ventilation of the containers must be ensured to keep VOC levels within required limits.

STORAGE

Store in a cool and dry place. For longest shelf life the warehouse must be dry and covered and the storing temperature between +5 °C ... +25 °C (lowest allowed temperature – 20 °C for a short time, up to 1 week e.g. during transportation). Preferably store and transport the cartridges in a vertical position. Prevent temperatures below - 20 °C and above + 50 °C. Guaranteed shelf life of 12/15/18 months (depending on the product) after production date is valid only if the storage and handling instructions are fully followed.



DISPOSAL OF PACKAGING MATERIALS

The wooden pallet used during transportation can be burnt and PE plastic packing film can be taken to a waste disposal plant. **Product disposal:** dispose of waste and residues in accordance with local authority requirements.

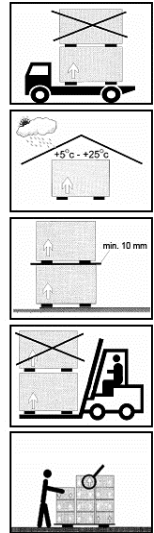
EMERGENCY ACTIONS

Avoid contact with skin and eyes. Ensure adequate ventilation. Wear protective equipment.

Cleaning up spillage: silicone- or bitumen sealant should be removed mechanically. Wear protective gloves, in a poorly ventilated area a facemask must be worn. White spirit may be used as solvent for any uncured spillage of silicone or bitumen sealant.

Firefighting recommendations: Water should be used as a cooling agent. In event of fire extinguishing foam is recommended.

Check MSDS or TDS of respective product for further information!



Acrylic sealants (“standard” or “summer” version)

GENERAL INSTRUCTIONS

The warehouse to store the products must be dry and covered and the **storing temperature between +5 °C - +25 °C, temperatures below +5 °C and above + 50 °C must be strictly prevented** to ensure guaranteed shelf life of the product.

The pallets are **preferably to be stored in an upright position**, on a horizontally straight, hard and dry base, the cartons must be protected from moisture. The pallets can be piled, depending on the respective product (rf respective pallet sheet), with sandwich plate of a minimal thickness of 10 mm with minimal flexural strength of 12,5 N/mm² placed in between them if so indicated.

Acrylic sealant is not frost-resistant. **Acrylic sealant must be protected from freezing; product is not usable after freezing.**

TRANSPORTATION

Possibility of piling of the pallets during transportation is depending of respective product (shown on each pallet sheet). **Maximal pile is limited with two pallets in all cases.** The movement of pallets has to be prevented and they have to be protected from rain and excessive moisture.

Avoid strictly temperatures below +5 °C and above + 50 °C.

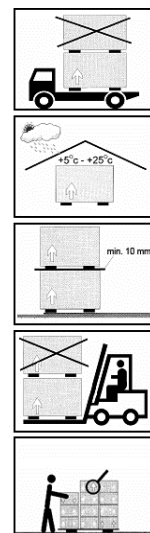
Lifting and transfer of the pallets has to be done carefully and precisely. The cartons are preferably to be stored in an upright position.

Transportation in intermodal containers: all pallets must be fixed to avoid movement. Transportation of loose, unsecured cartons within container is not allowed, all cartons must be fixed (wrapped) on pallet fully secured against movement. Last row of pallets must be secured in a way to prevent occasional fallout when container doors are opened.

During long-distance transportation via sea-freight strict attention to humidity levels and temperature must be paid, **temperatures below +5 °C and above + 50 °C must be strictly prevented**, as affecting the product quality. Ventilation of the containers must be ensured to keep VOC levels within required limits.

STORAGE

Store in a cool and dry place. For longest shelf life the warehouse must be dry and covered and the storing temperature between +5 °C ... +25 °C (lowest allowed temperature +5 °C, protect product from freezing). Preferably store and transport the cartridges in a vertical position. Prevent temperatures below +5 °C and above + 50 °C. Guaranteed shelf life of 18 months after production date is valid only if the storage and handling instructions are fully followed.



DISPOSAL OF PACKAGING MATERIALS

The wooden pallet used during transportation can be burnt and PE plastic packing film can be taken to a waste disposal plant. **Product disposal:** dispose of waste and residues in accordance with local authority requirements.

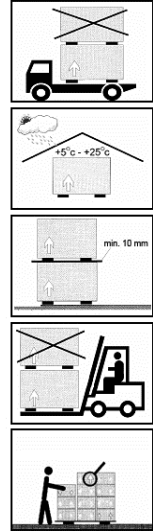
EMERGENCY ACTIONS

Avoid contact with skin and eyes. Ensure adequate ventilation. Wear protective equipment.

Cleaning up spillage: acrylic sealant should be removed mechanically. Wear protective gloves, in a poorly ventilated area a facemask must be worn. Water may be used as solvent for any uncured spillage of acrylic sealant.

Firefighting recommendations: Water should be used as a cooling agent. In event of fire extinguishing foam is recommended.

Check MSDS or TDS of respective product for further information



Acrylic sealants (“winter” version)

GENERAL INSTRUCTIONS

The warehouse to store the products must be dry and covered and the **storing temperature between +5 °C - +25 °C**, temperatures below -15 °C and above + 50 °C must be strictly **prevented** to ensure guaranteed shelf life of the product.

The pallets are **preferably to be stored in an upright position**, on a horizontally straight, hard and dry base; the cartons must be protected from moisture. The pallets can be piled, depending on the respective product (rf respective pallet sheet), with sandwich plate of a minimal thickness of 10 mm with minimal flexural strength of 12,5 N/mm² placed in between them if so indicated.

Acrylic silicone (“winter” version) is frost-resistant, withstanding **5 cycles off freeze-thaw up to -15°C** during transportation/ storage. Maximal time for one such cycle must not exceed more than 5 days.

TRANSPORTATION

Possibility of piling of the pallets during transportation is depending of respective product (shown on each pallet sheet). **Maximal pile is limited with two pallets in all cases**. The movement of pallets has to be prevented and they have to be protected from rain and excessive moisture.

Avoid strictly temperatures below -15 °C and above + 50 °C, following strictly the number and length of freeze-thaw cycles.

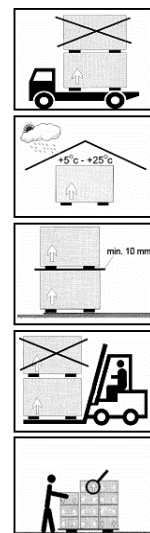
Lifting and transfer of the pallets has to be done carefully and precisely. The cartons are preferably to be stored in an upright position.

Transportation in intermodal containers: all pallets must be fixed to avoid movement. Transportation of loose, unsecured cartons within container is not allowed, all cartons must be fixed (wrapped) on pallet fully secured against movement. Last row of pallets must be secured in a way to prevent occasional fallout when container doors are opened.

During long-distance transportation via sea-freight strict attention to humidity levels and temperature must be paid, **temperatures below -15 °C and above + 50 °C must be strictly prevented**, as affecting the product quality. Ventilation of the containers must be ensured to keep VOC levels within required limits.

STORAGE

Store in a cool and dry place. For longest shelf life the warehouse must be dry and covered and the storing temperature between +5 °C ... +25 °. Preferably store and transport the cartridges in a vertical position. Prevent temperatures below -15 °C and above + 50 °C, considering the number and length of freeze-thaw cycles. Guaranteed shelf life of 18 months after production date is valid only if the storage and handling instructions are fully followed.



DISPOSAL OF PACKAGING MATERIALS

The wooden pallet used during transportation can be burnt and PE plastic packing film can be taken to a waste disposal plant. **Product disposal:** dispose of waste and residues in accordance with local authority requirements.

EMERGENCY ACTIONS

Avoid contact with skin and eyes. Ensure adequate ventilation. Wear protective equipment.

Cleaning up spillage: acrylic sealant should be removed mechanically. Wear protective gloves, in a poorly ventilated area a facemask must be worn. Water may be used as solvent for any uncured spillage of acrylic sealant.

Firefighting recommendations: Water should be used as a cooling agent. In event of fire extinguishing foam is recommended.

Check MSDS or TDS of respective product for further information

