

TITLE:

## **Bonding Agent TP LXS 51099**

TEXT:

Bonding Agent TP LXS 51099 is a high performance, reactive and a phthalate- and solvent-free one-component bonding agent used to improve the adhesion of PVC plastisol coatings to substrates made of polyester or polyamide. Bonding Agent TP LXS 51099 has moderate viscosity and therefore easy to handle during processing. Bonding Agent TP LXS 51099 is a formulation in Isononylbenzoate.

<b>Chemical composition</b>	formulation of a polyisocyanurate in Isononylbenzoate
<b>Physical form</b>	Yellow, viscous liquid
<b>CAS No.:</b>	670241-72-2 (INB)
<b>Health and safety information</b>	Relevant safety data and references as well as possibly necessary warning labels can be found in the safety data sheet.
<b>Indication according to GefStoffV</b>	Bonding Agent TP LXS 51099 is subject to labelling according to the German Regulation on Dangerous Substances (GefStoffV), GHS and corresponding EU directives.

### Product Properties

Property	Typical Value	Unit	Test Method
Viscosity at 23 °C	approx. 6,000-15,000	mPa-s	DIN EN ISO 3219/A.3 Rotation
NCO content	4 - 6	%	DIN EN ISO 11909 (method based on)
Monomer content (TDI)	< 1	%	DIN 55 956
Flash point	154	°C	DIN EN ISO 2719

## POLYMER ADDITIVES



## Storage

Bonding Agent TP LXS 51099 is highly sensitive to moisture and must therefore always be kept in its tightly sealed original container in a cool and well ventilated place.

## Packaging

60 kg steel cans  
225 kg steel drums

**These raw material properties are typical properties and, unless specifically indicated otherwise, are not to be considered as delivery specification.**

## Instructions and recommendations for use

Bonding Agent TP LXS 51099 is a formulation of a polyisocyanurate based on toluene diisocyanate (TDI). Although it contains the smallest amount of monomeric TDI possible according to the current state of the art (< 1.0 % by wt. respectively), traces of monomeric diisocyanate are none the less sometimes present in the air around where the product is handled. Workplaces must be adequately ventilated (occupational exposure limits such as German MAK values must be observed). Respiratory protection is necessary in cases where the product is applied by spraying. Employees with a particularly sensitive respiratory tract (i.e. those with asthma, chronic bronchitis etc.) must not be allowed to handle the product.

General instructions for processing bonding agents and information on the properties common to isocyanate-containing bonding agent systems are to be found in relevant literature. Of the bonding agent systems available, one-component bonding agents such as Bonding Agent TP LXS 51099 are the easiest to handle. The product is solvent-free and generally has no effect on the initial viscosity of the base coat plastisol when added to it. The use of Bonding Agent TP LXS 51099 in transparent, translucent or white-coloured coatings may cause yellowing on exposure to light or extreme high temperature owing to the product's aromatic character.

## Handling

Particular care must be taken when handling Bonding Agent TP LXS 51099.

### Technical protective measures

Containers must be kept tightly sealed in a cool, dry place which is adequately ventilated. They must not be exposed to temperatures of 40 °C or above. Adequate ventilation and/or extraction must be provided at the workplace. If the product is sprayed, extraction is necessary.

### Personal protective measures

When handling bonding agents, care must be taken to make sure the substances are not swallowed or inhaled. Contact with the skin or eyes should be avoided. Soiled clothing should be removed at once.

During handling, suitable protective clothing and (PVC or rubber) gloves should be worn, along with protective eye wear/facial protection. Respiratory protection must be worn in workplaces which are insufficiently ventilated and whenever the work involves spraying. Air-fed masks are recommended for longer periods of work, otherwise an A2-P2 combination filter should be worn.

## POLYMER ADDITIVES

## First aid in the event of accidents and fires

If the product comes into contact with the eyes, rinse the eyes with water ( min. 10 minutes ), keeping the eyelids occasionally open, and seek medical advice immediately, preferably from an eye specialist. If the product comes into contact with the skin, remove it mechanically and wash it min. 10 minutes off carefully with plenty of water. A doctor should be consulted if there is irritation of the respiratory tract or if the product is swallowed.

The product must be prevented from entering the sewerage system. Spilled material should be removed mechanically and any remaining residue should be smothered with moist, liquid-binding material (e.g. sawdust, chemical binders based on calcium silicate hydrate or sand). After approx. 1 hour, the material can be transferred to a waste container, which should be left open (risk of CO<sub>2</sub> evolution). The waste should be kept moist in a safe place in the open for several days.

Fire may cause the formation of carbon monoxide, nitrogen oxide, isocyanate vapours and traces of hydrogen cyanide. Fire-fighters must wear self-contained breathing apparatus.

Dry powder, carbon dioxide and halons are suitable extinguishing agents. In the case of larger fires, foam or a water spray can also be used.

## Use and advice on quantities

Bonding Agent TP LXS 51099 is a phthalate free one-component bonding agent used to improve the adhesion of PVC plastisols coatings to synthetic fabrics made of polyester and polyamide. The bond strength of a coating is wholly dependent on the composition of the base coat. For this reason, the section below deals with the base coat only.

2 - 6 % Bonding Agent TP LXS 51099 is the quantity recommended for PVC base coat plastisols.

Bonding Agent TP LXS 51099 is a highly moisture sensitive reactive system and must be protected against environmental humidity. A fresh drum or can should be equipped with a moisture adsorber system via the second bunge hole. Take care that the adsorber is fresh or regenerated. The bonding agent should not be mixed into the PVC base coat plastisol until shortly before coating or processing.

Care should be taken to prevent the PVC plastisol from becoming too hot during stirring and to stop air bubbles from becoming trapped.

Overheating of the plastisol during stirring can have an adverse effect on potlife as it causes an increase in viscosity and a reduction in bond strength.

Edition: 09 August 2011

The above formulation is intended solely as a guide for our business partners and others interested in our products. As the conditions of use and application of the suggested formulation are beyond our control, it is imperative that it be tested to determine, to your satisfaction, whether it is suitable for your intended use(s) and application(s). This application-specific analysis at least must include testing to determine suitability from a technical, as well as health, safety and environmental standpoints. Further, although the ingredients, quantities thereof and properties of compounds or finished goods mentioned herein reflect our recommendation at the time of publication, this guide may not be subject to continuous review and/or updating, and you agree that use is undertaken at your sole risk. All information is given without warranty or guarantee, and it is expressly understood and agreed that you assume, and hereby expressly release us from, all liability, in tort, contract or otherwise, incurred in connection with the use of this guide.

This is a trial product. Further information, including amended or supplementary data on hazards associated with its use, may be compiled in the future. For this reason no assurances are given as to type conformity, processability, long-term performance characteristics or other production or application parameters. Therefore, the purchaser/user uses the product entirely at his own risk without having been given any warranty or guarantee and agrees that the supplier shall not be liable for any damages, of whatever nature, arising out of such use. Commercialisation and continued supply of this material are not assured. Its supply may be discontinued at any time.

Lanxess, D-51369 Leverkusen  
Functional Chemicals Polymer Additives

## POLYMER ADDITIVES

